

09858327.05150.1  
TOST50"Z2E85860

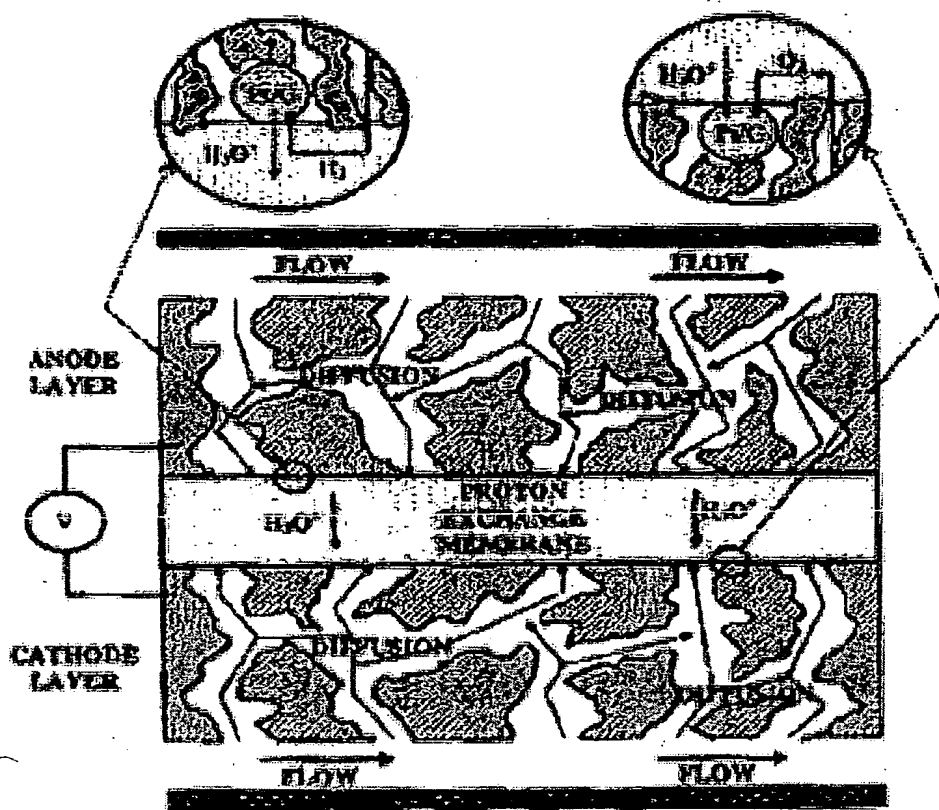


Figure 1A

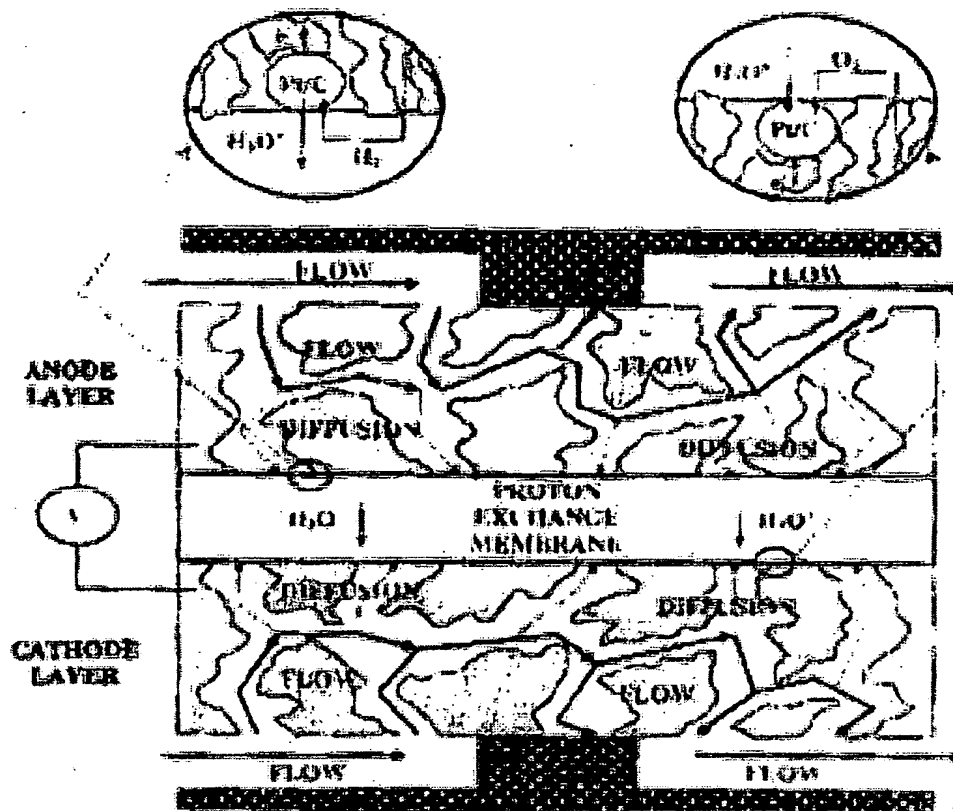
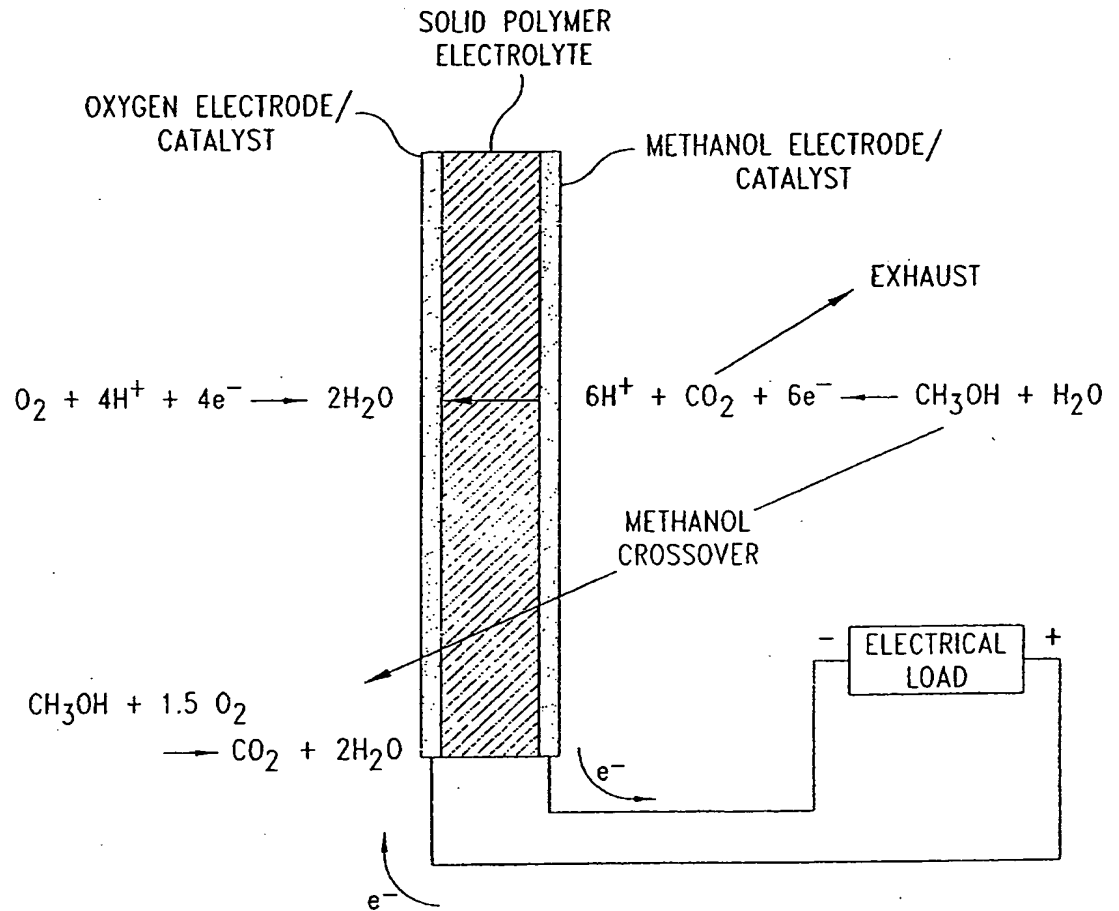


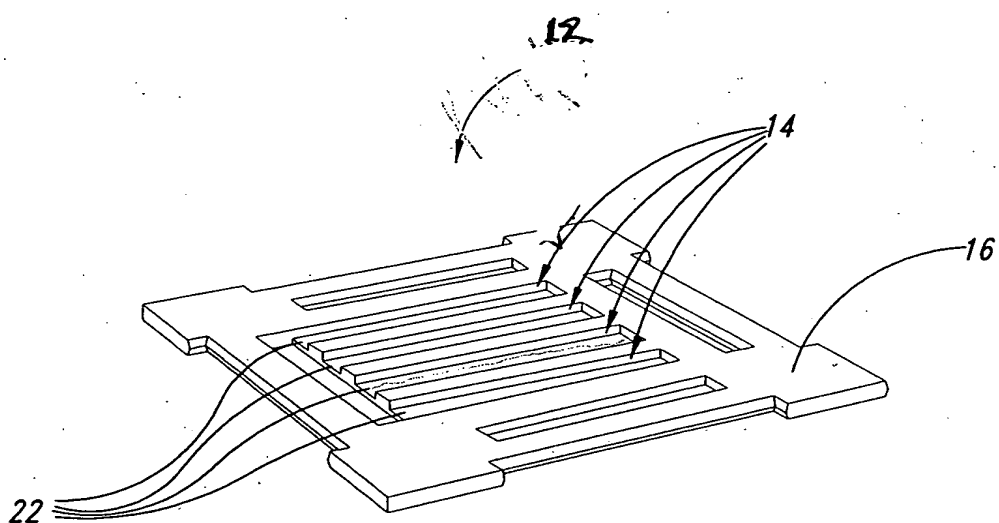
Figure 1B

09858327-051501



*Fig. 2*  
(Prior Art)

09858327.051501



*Fig. 3*

09858327.051501

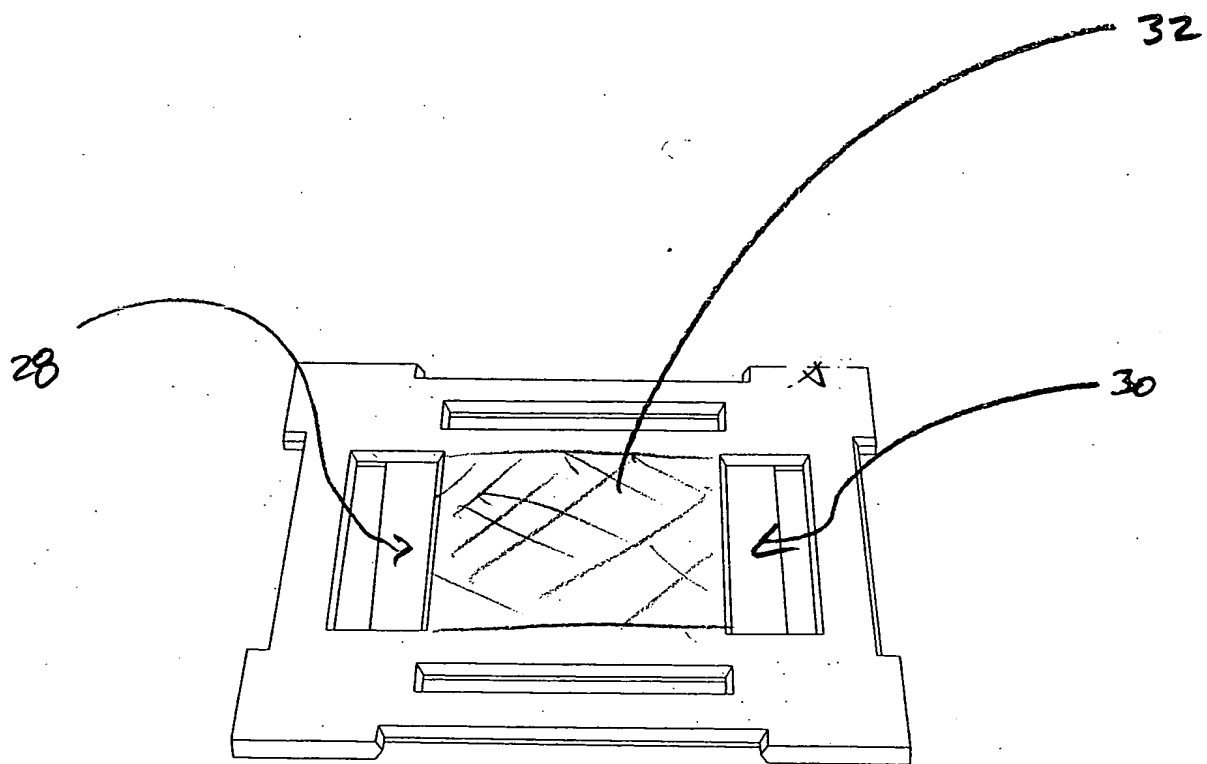
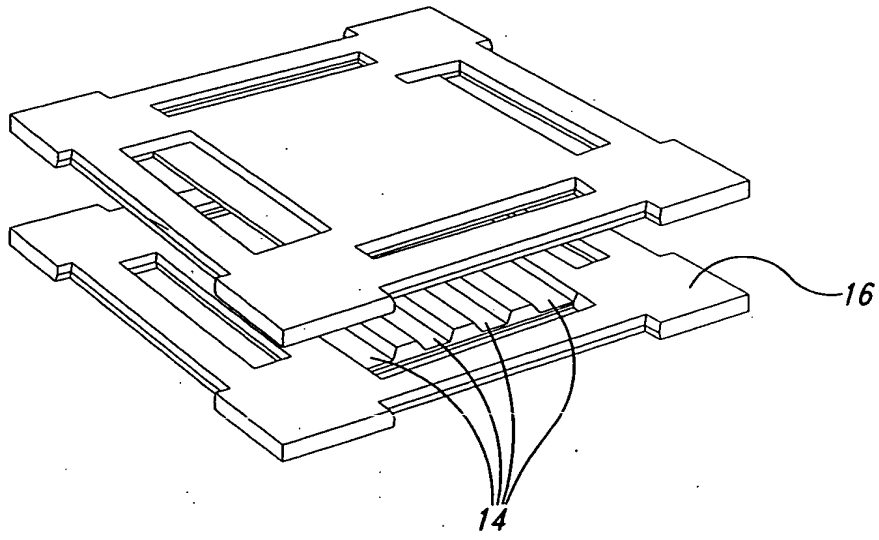
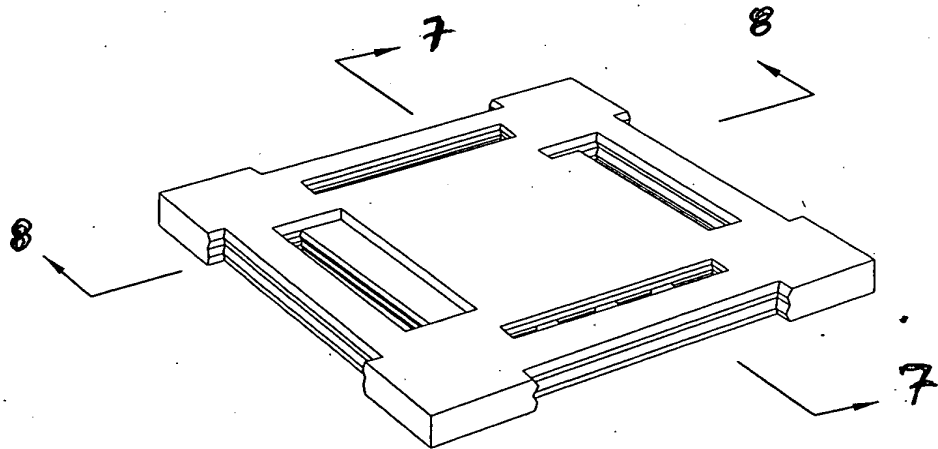


Fig. 4

09858327.051501  
TOST50 22E85860



*Fig. 5*



*Fig. 6*

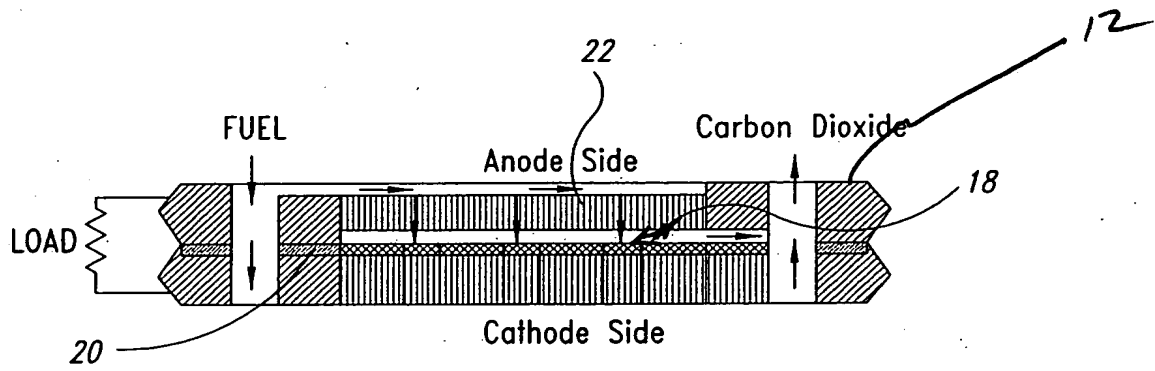
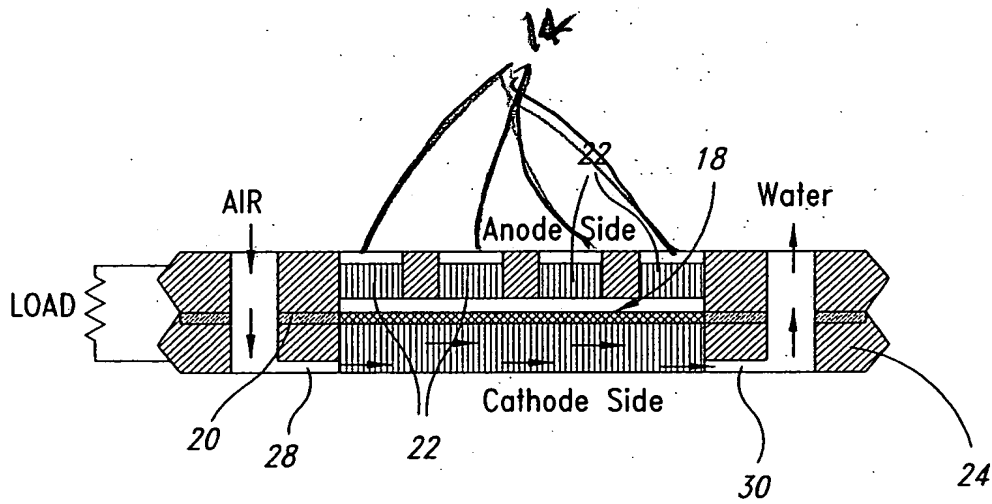


Fig. 7








- |   |                   |   |                        |
|---|-------------------|---|------------------------|
|  | Flow Channel      |  | Porous Catalyst Region |
|  | Silicon Substrate |  | Methanol Barrier Layer |
|   |                   |  | Wafer Bonding Material |

Fig. 8

09858327.051501

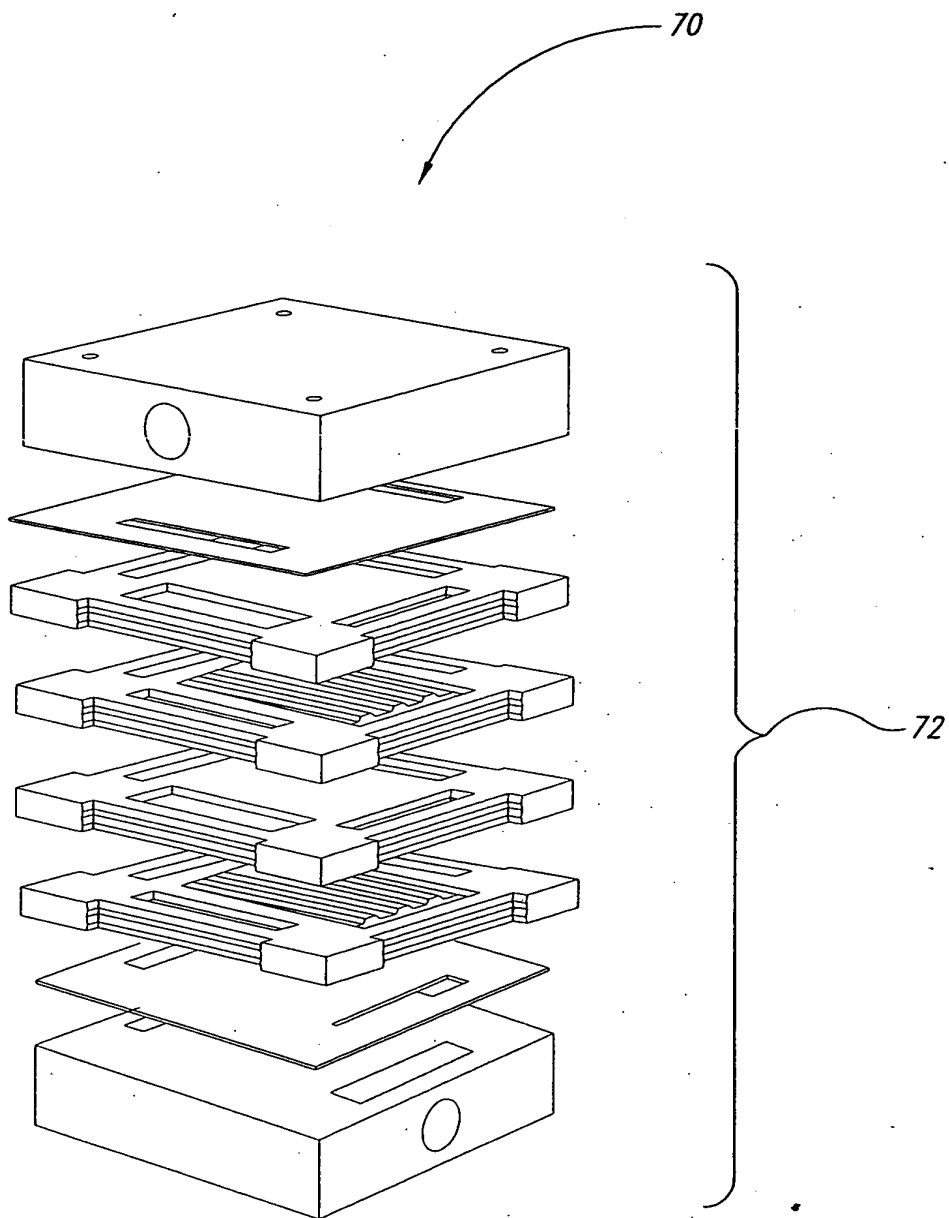


Fig. 9



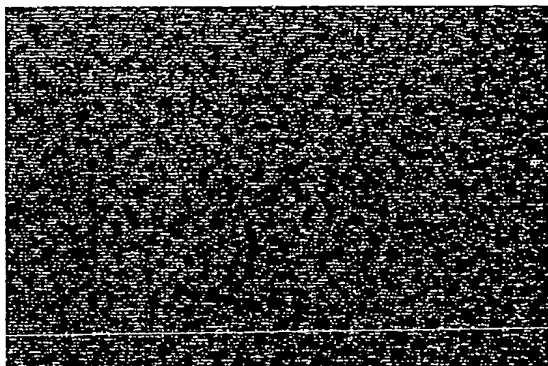


Fig 10A

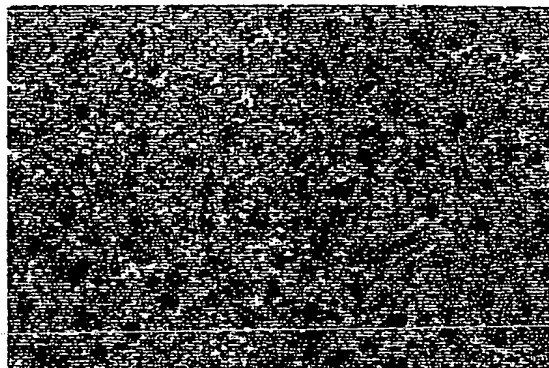


Fig 10B

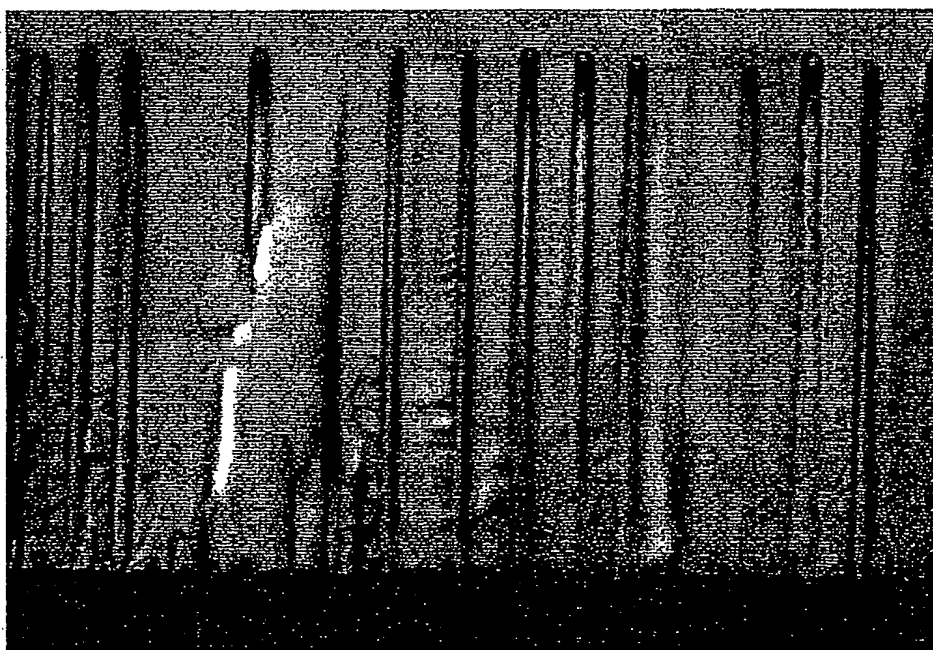


Fig 11

09858327-051501

09858327-051501

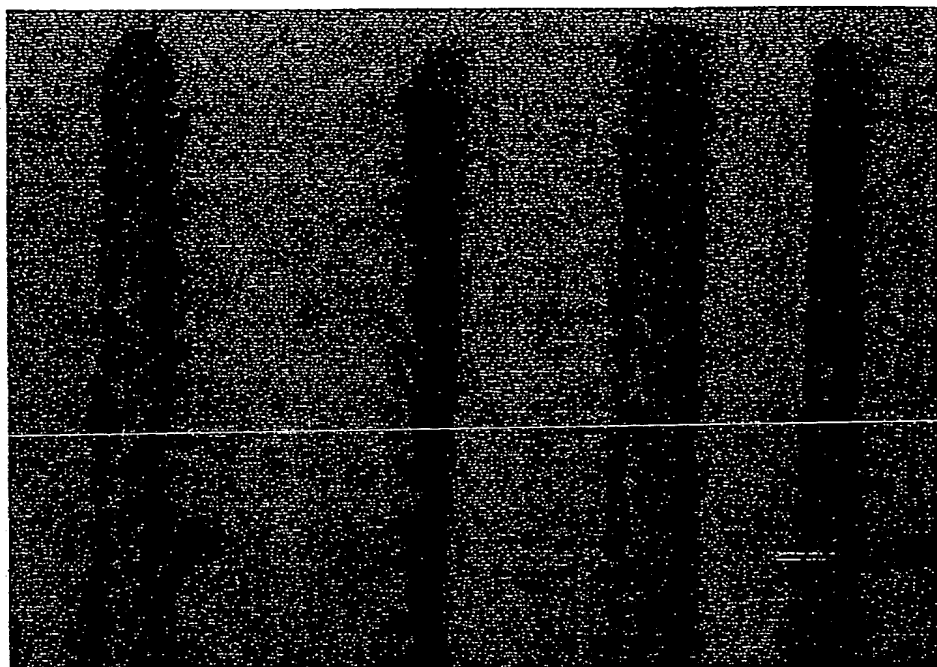


Fig. 12

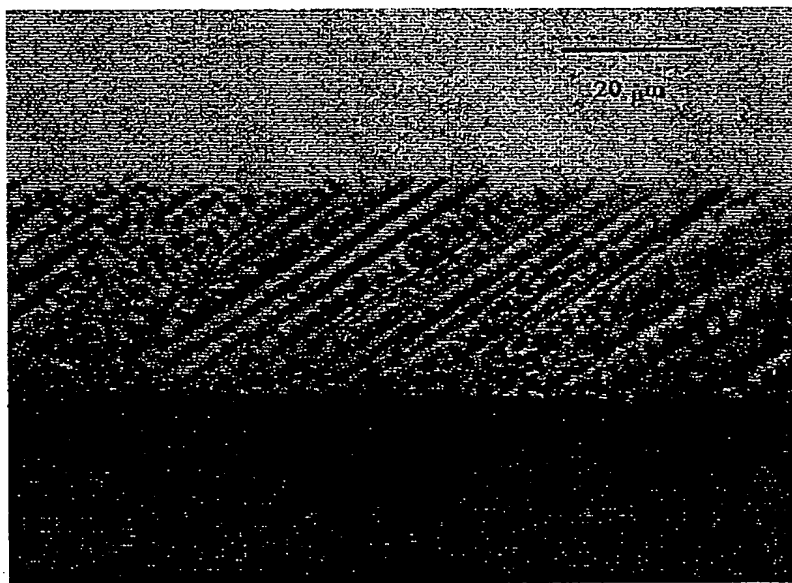


Fig. 13

0958327.051501

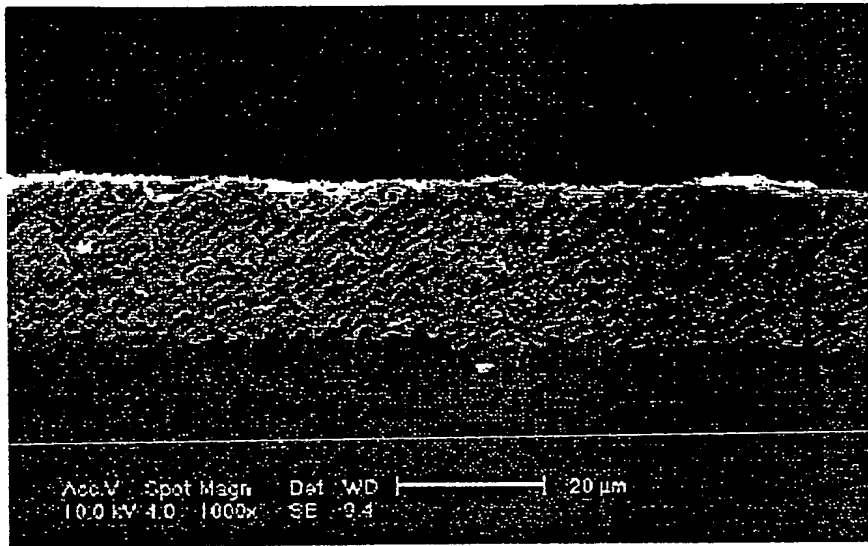


Fig. 14

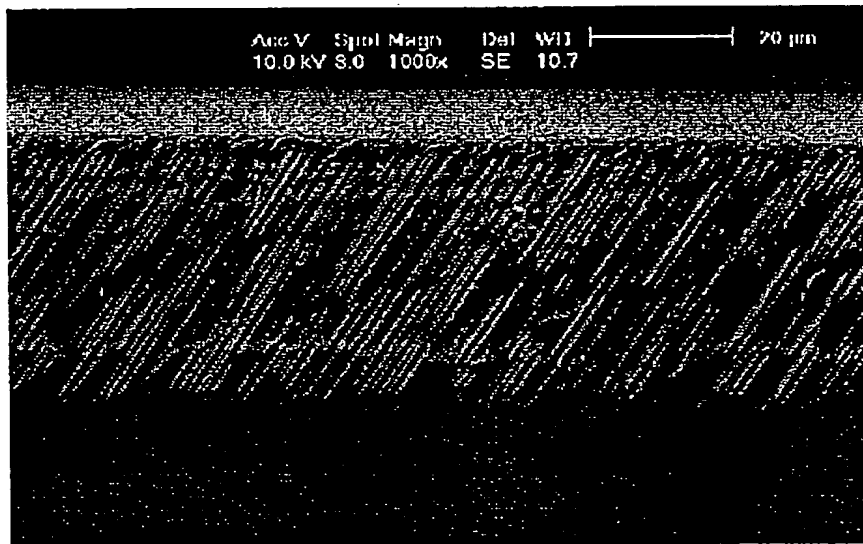
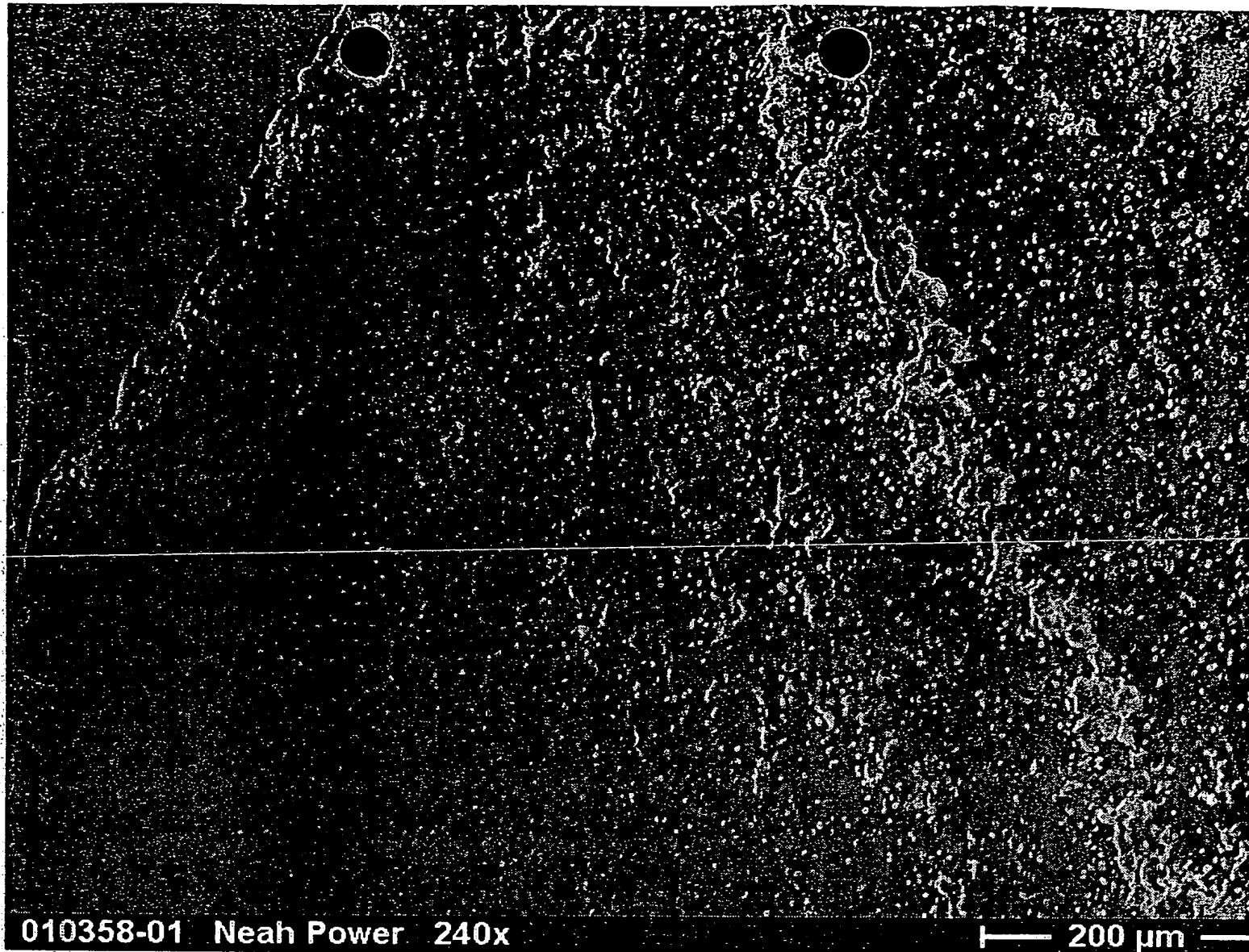


Fig. 15



010358-01 Neah Power 240x

— 200 μm —

Fig. 1.2/6

09858327-051501

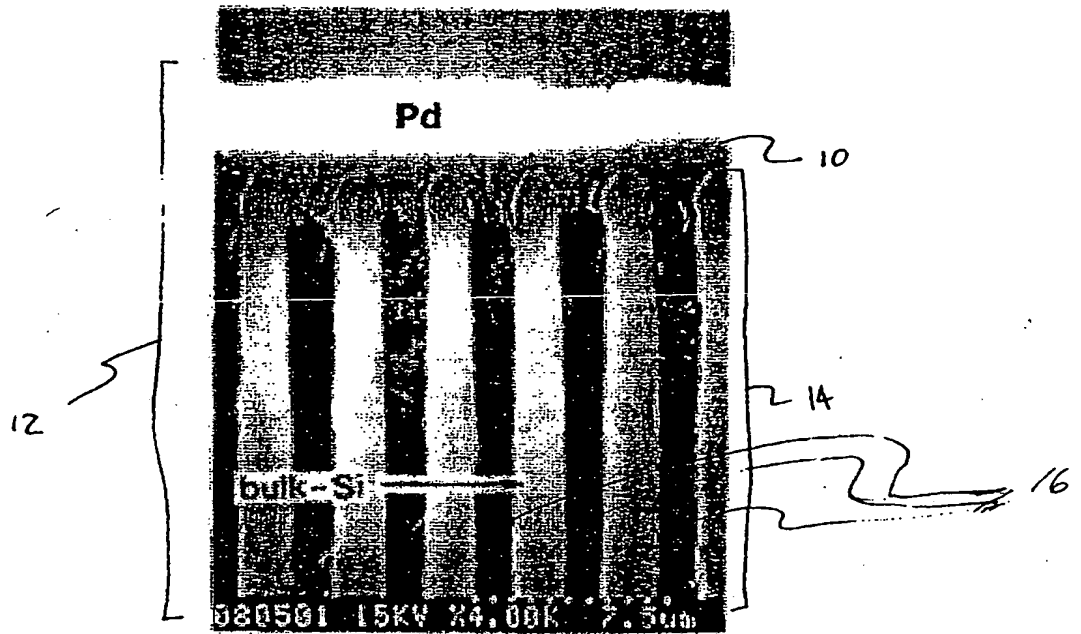
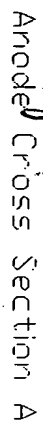


Figure ~~16~~ 17



Anode Cross Section A



Anode Cross Section B

1016 *Impatiens capensis* (L.) - 5 migan  
childrens Hospital open house Oct 10, 2005  
for children.

**0637-193**

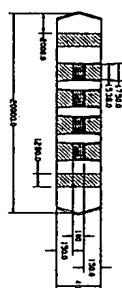
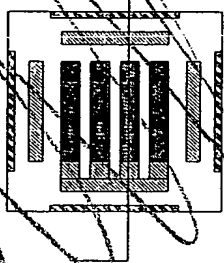


Fig 13A  
Cross Section A



~~Cross Section E~~

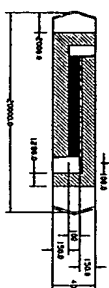
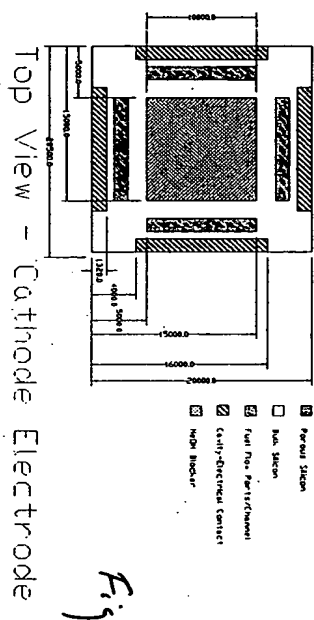


Fig 19c

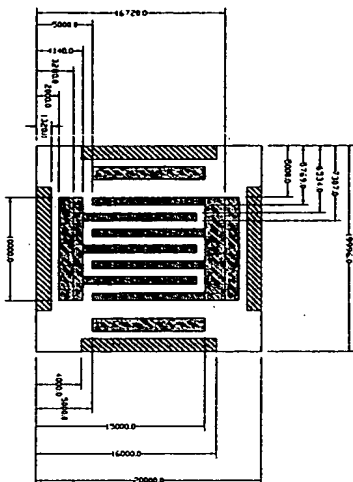
[illegible]

0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z												
0000	0001	0010	0011	0100	0101	0110	0111	1000	1001	1010	1011	1100	1101	1110	1111	0000	0001	0010	0011	0100	0101	0110	0111	1000	1001	1010	1011	1100	1101	1110	1111	0000	0001	0010	0011	0100	0101	0110	0111	1000	1001	1010	1011	1100	1101	1110	1111



Top View - Cathode Electrode

Fig 20A



Bottom View - Cathode Electrode

III. E. Thompson and J. H. Johnson + J. H. Johnson.

[illegible]



## Fig 21



Fig 21

# SECRET

## Cathode Electrode

T05T50" 22E8860

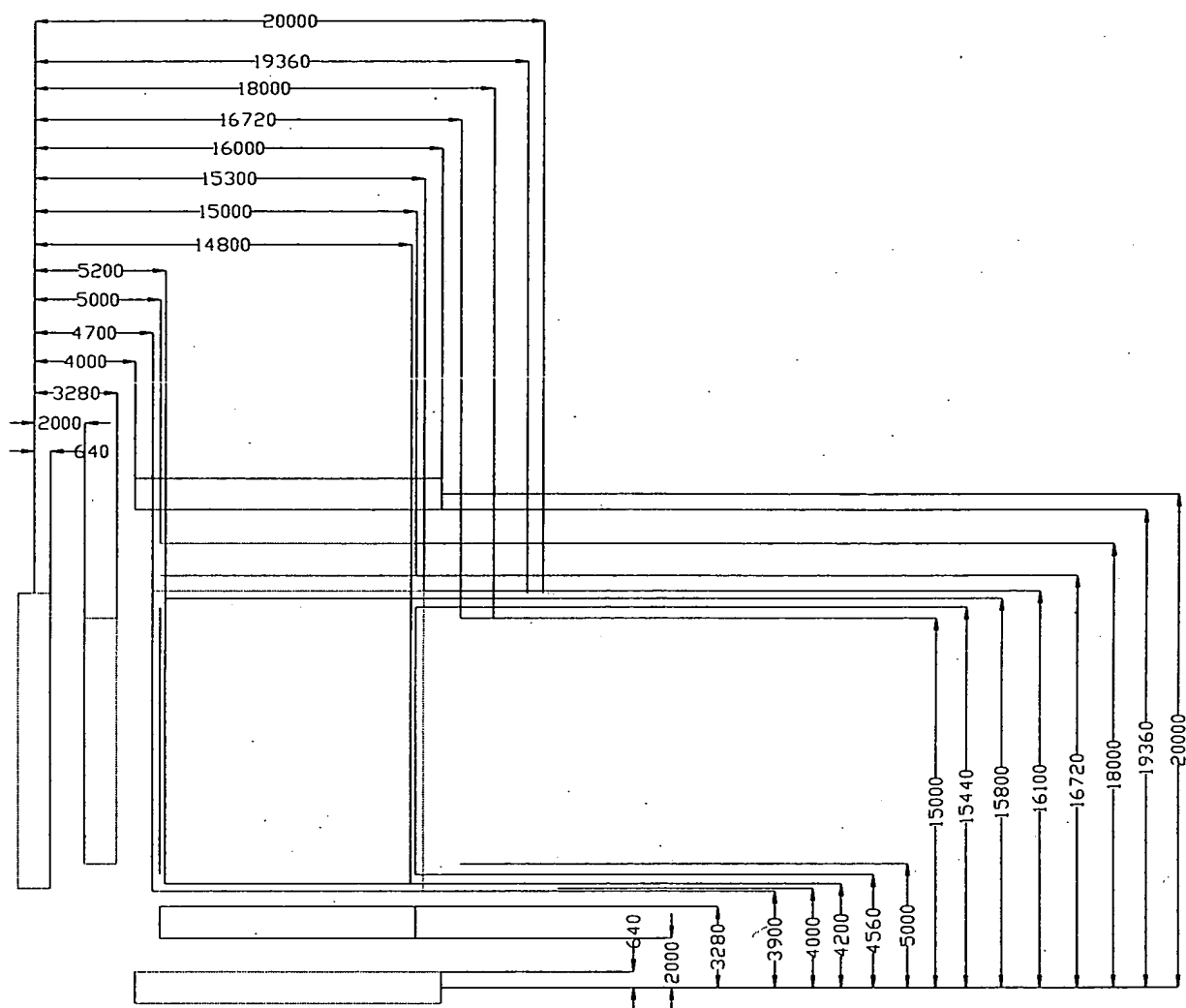
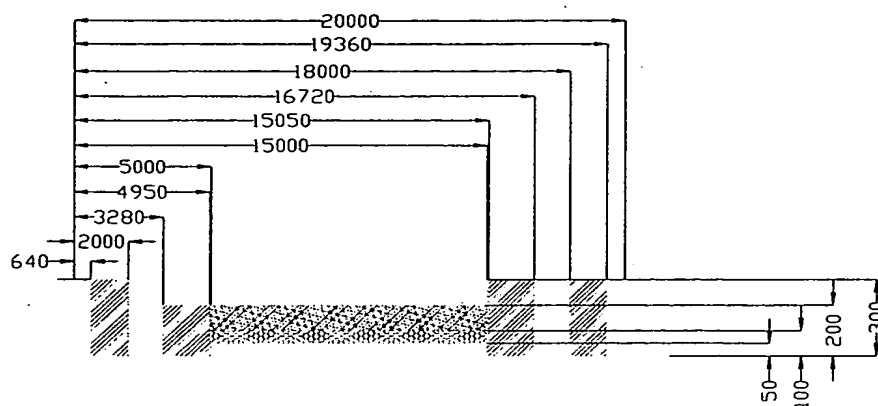







Fig 22A

Top View [X,Y] x1 scale



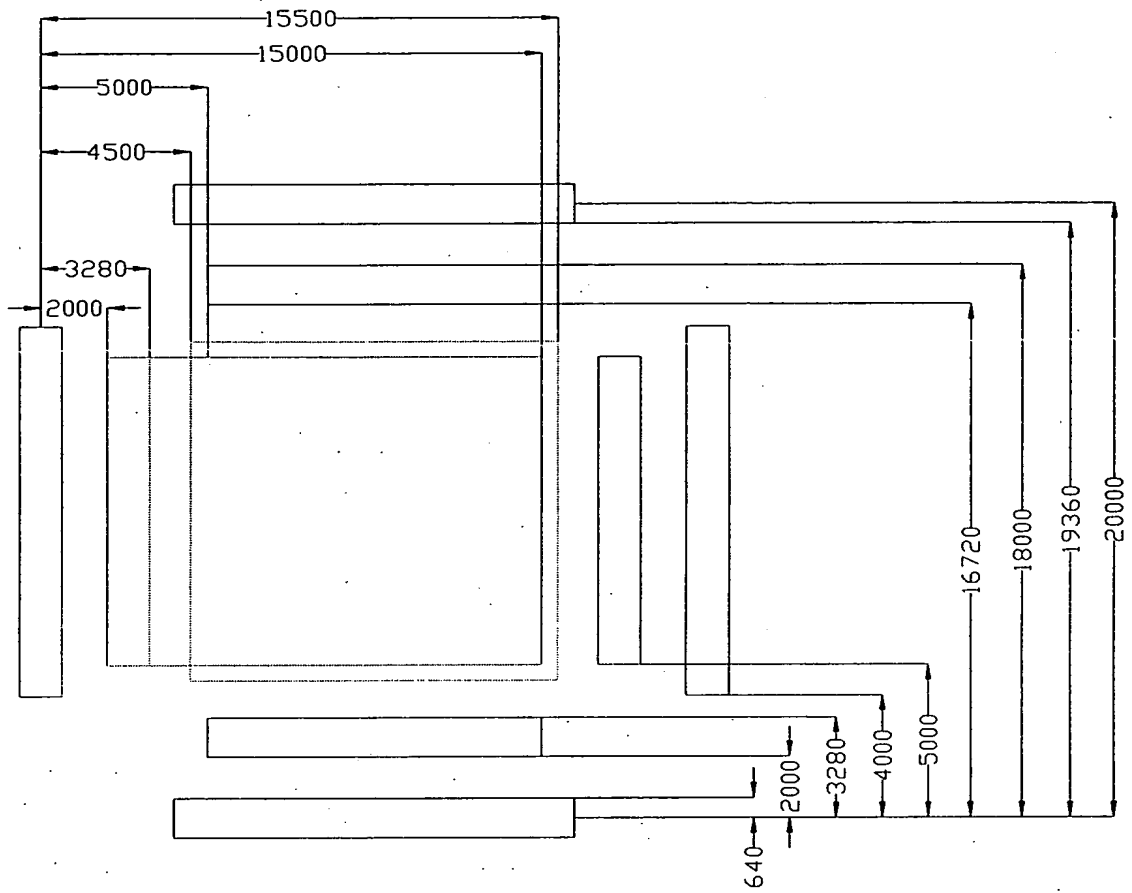
-  Porous Silicon
-  Bulk Silicon
-  Sol-gel
-  SiO<sub>2</sub> 5000 Angstroms on bottom side
-  Au/TiW 2.05 Microns on Top and Bottom side

Side View

Fig. 22B

09858327-051501

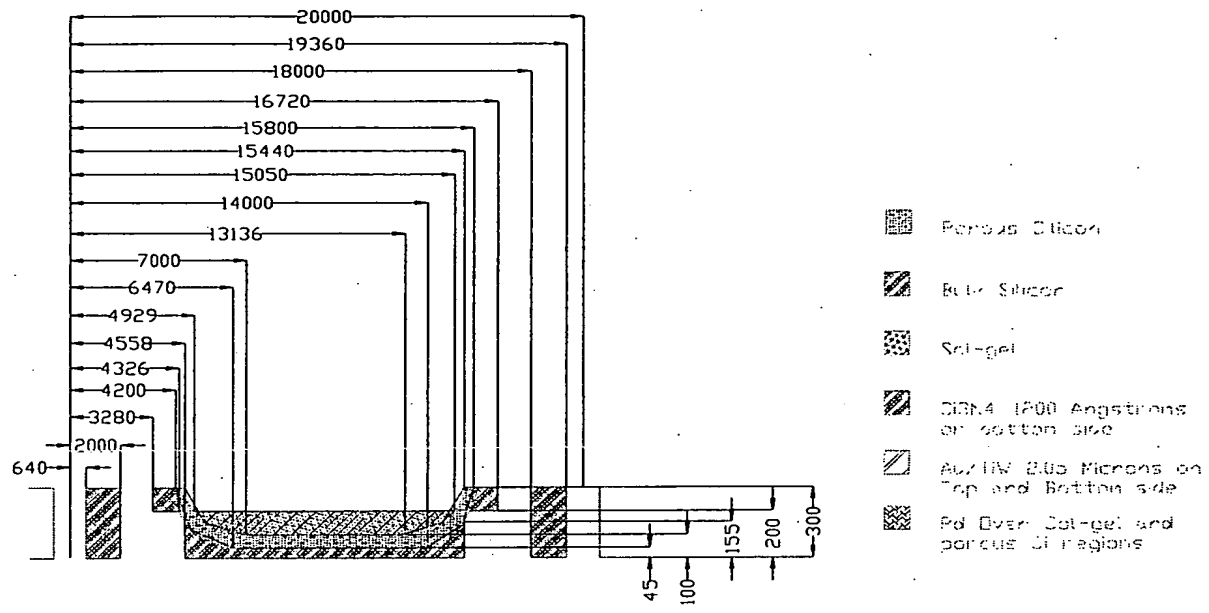
# Anode Electrode



Top View [X,Y] x scale

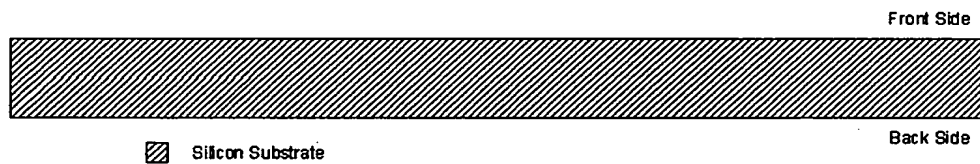
Fig. 22C

09858327 051501

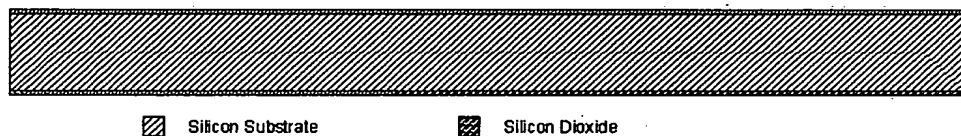


Side View

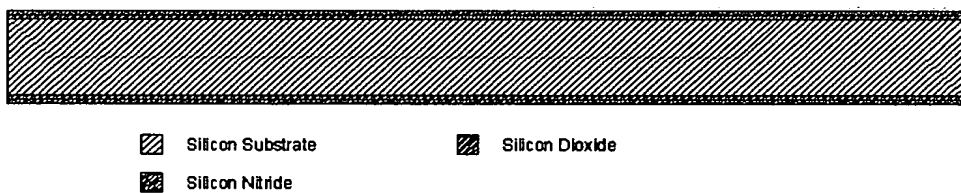
Fig. 22D



***Figure 23***



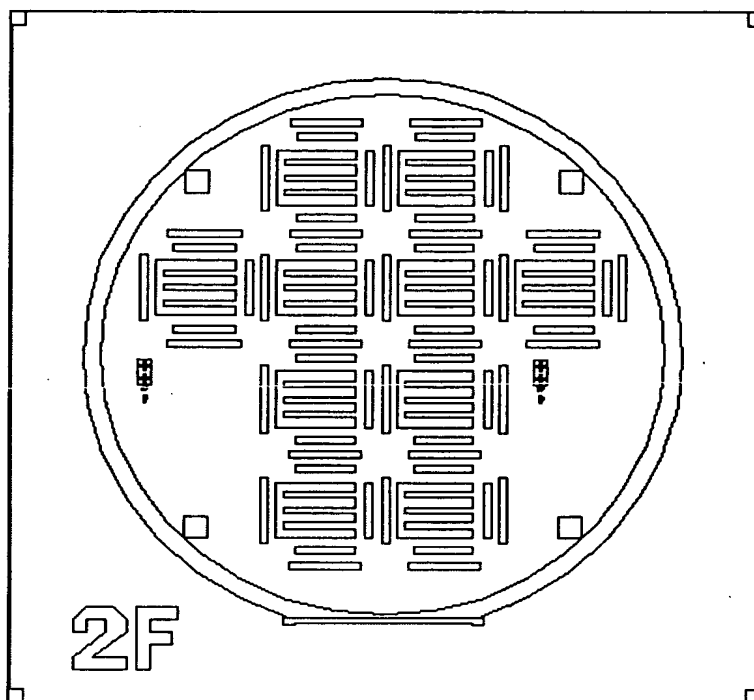
***Figure 24***



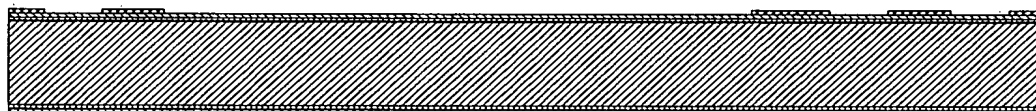
***Figure 25***


09858327-051501

09858327-051501

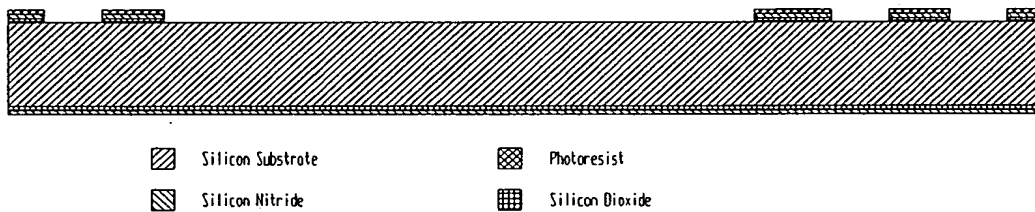


**Figure 26A**

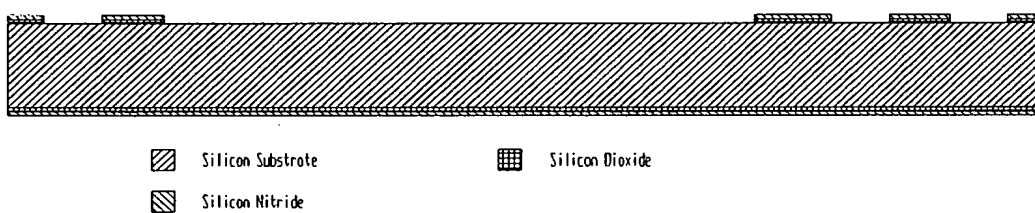


- |   |   |
|---|---|
|  Silicon Substrate |  Photoresist     |
|  Silicon Nitride   |  Silicon Dioxide |

**Figure 26B**



***Figure 27***

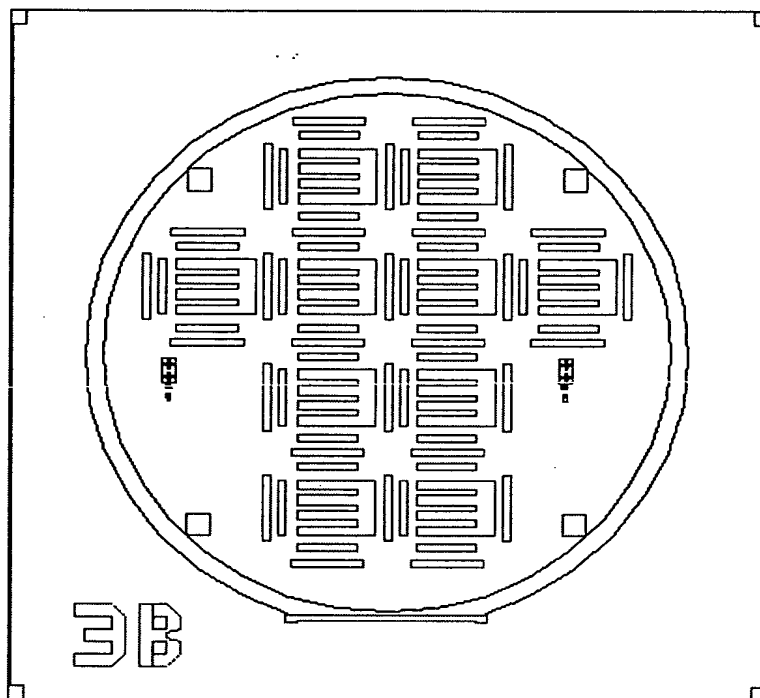


***Figure 28***

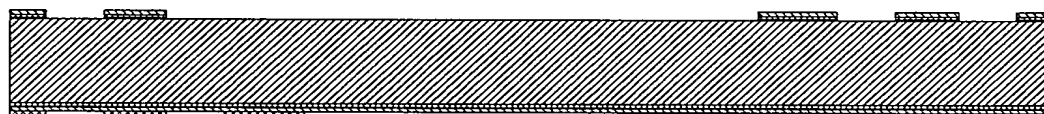
09858327, 051504



09858327-051501

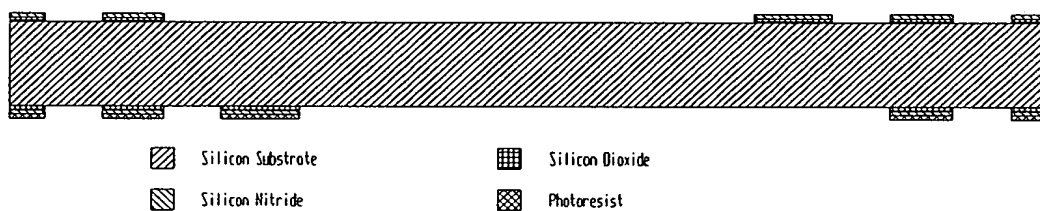


**Figure 29A**

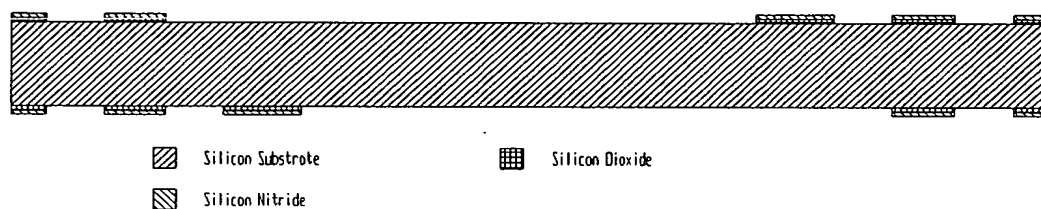


- |   |   |
|---|---|
|  Silicon Substrate |  Silicon Dioxide |
|  Silicon Nitride   |  Photoresist     |

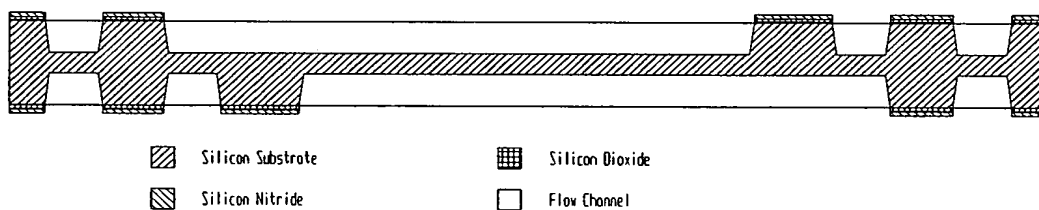
**Figure 29B**



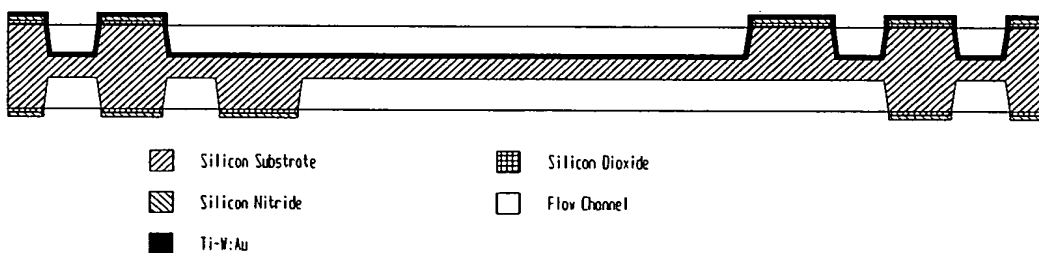
**Figure 30**



**Figure 31**

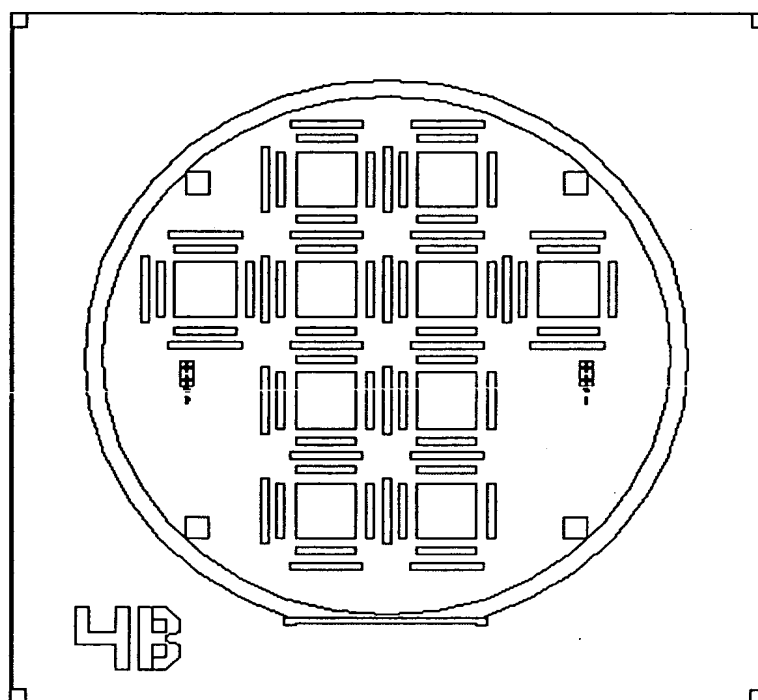


**Figure 32**

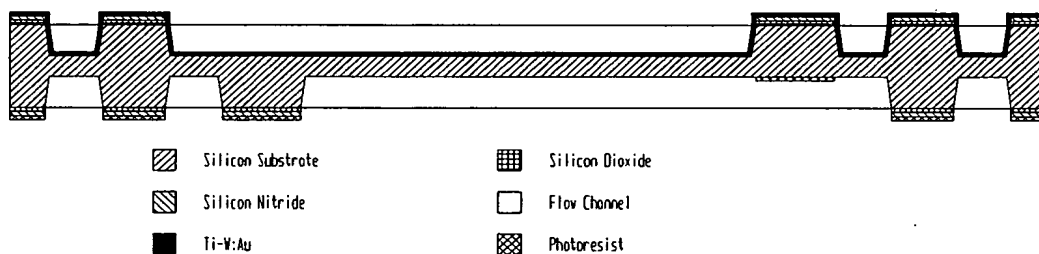


**Figure 33**

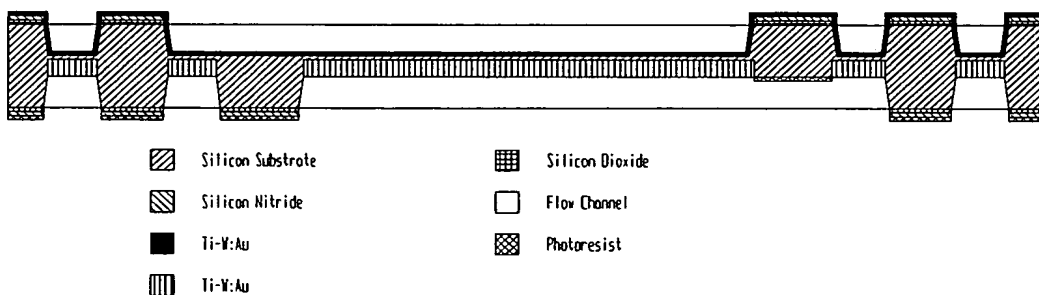
09858327.054.50.1



**Figure 34A**

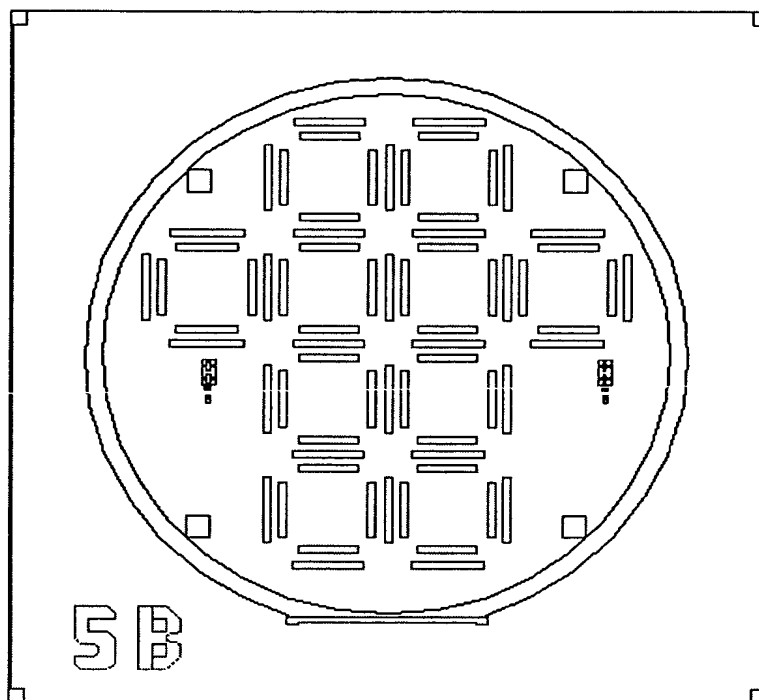


**Figure 34B**

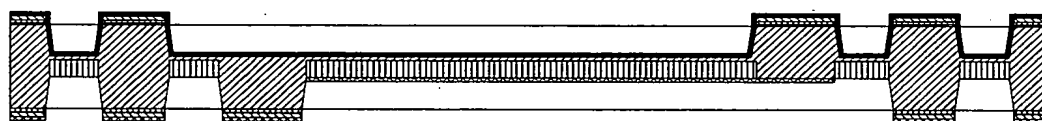









**Figure 35**

09858327.051504

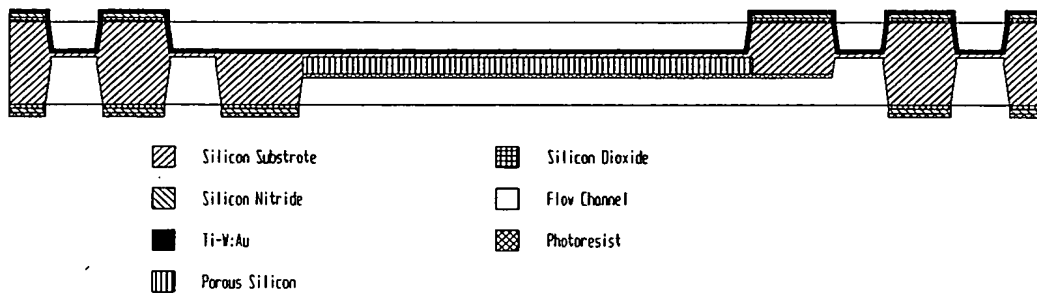


*Figure 36A*

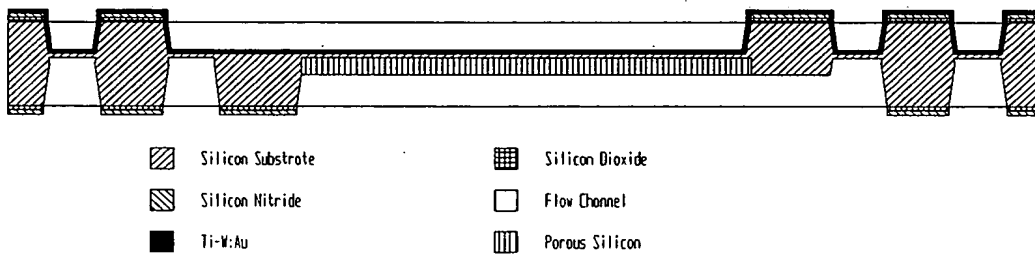


- |   |   |
|---|---|
|  Silicon Substrate |  Silicon Dioxide |
|  Silicon Nitride   |  Flow Channel    |
|  Ti-W:Au           |  Photoresist     |
|  Ti-W:Au           |   |

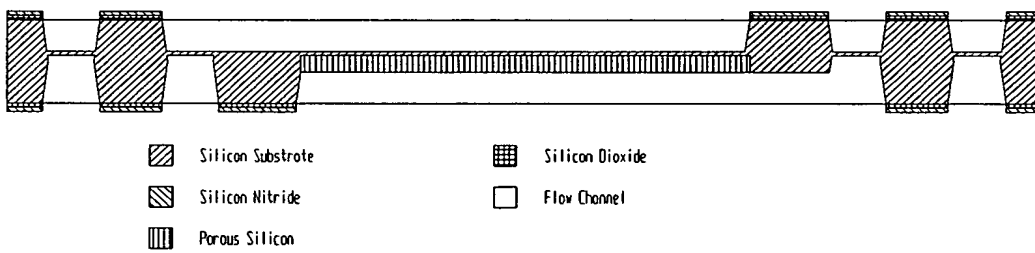
*Figure 36B*



**Figure 37**



**Figure 38**



**Figure 39**

09858327-051501

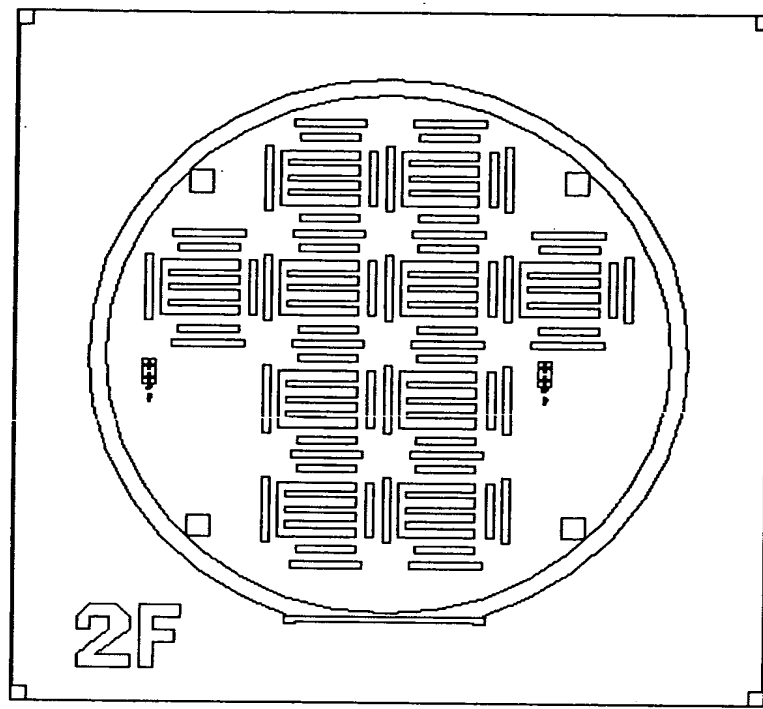


Figure 40A

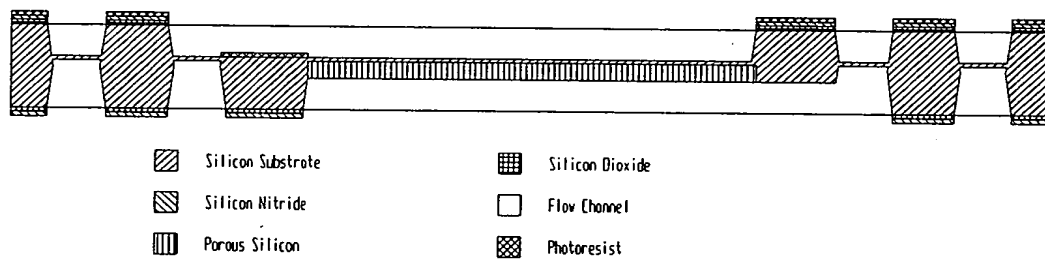
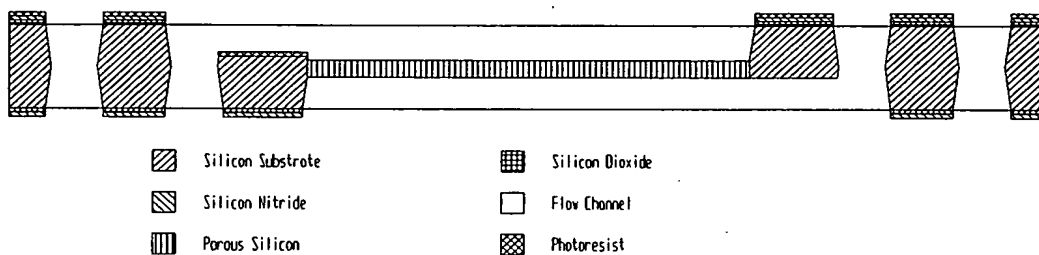
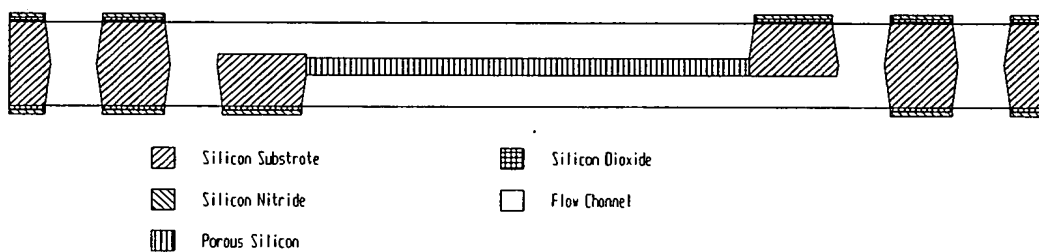


Figure 40B

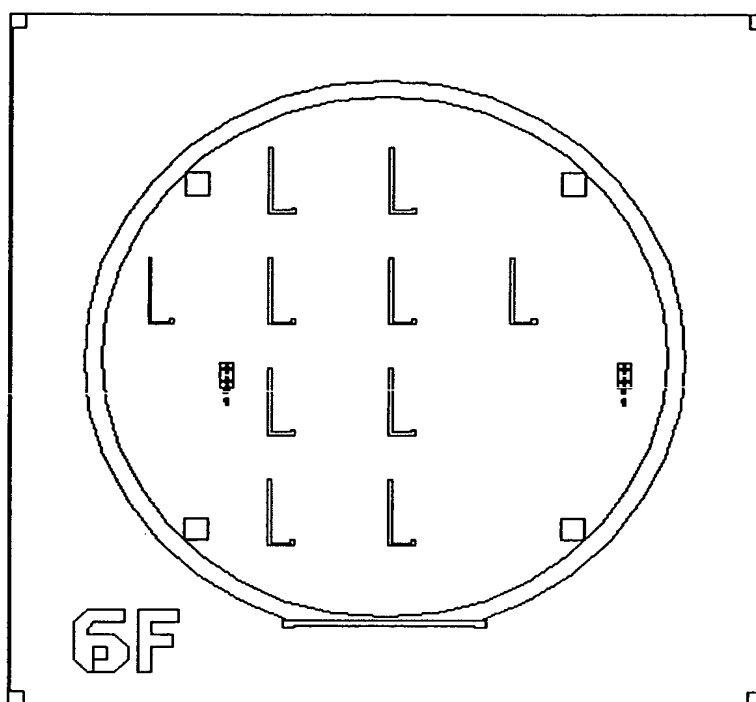


**Figure 41**

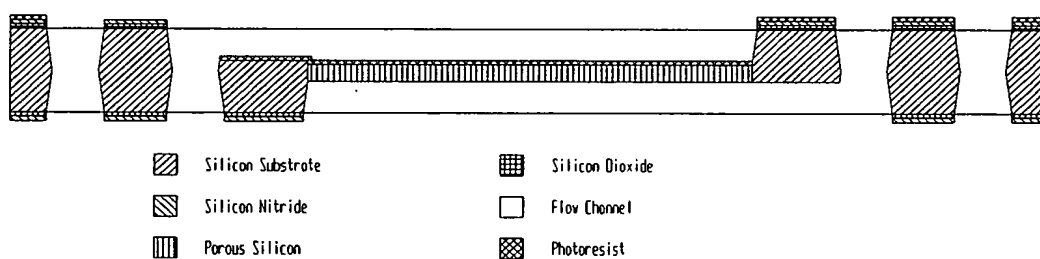


**Figure 42**

09858327.051501

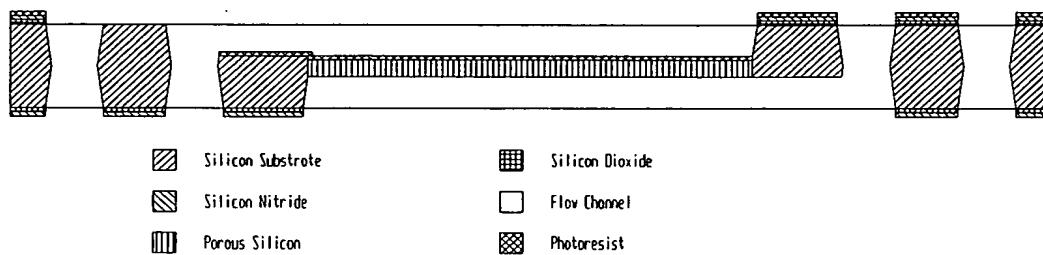


**Figure 43A**

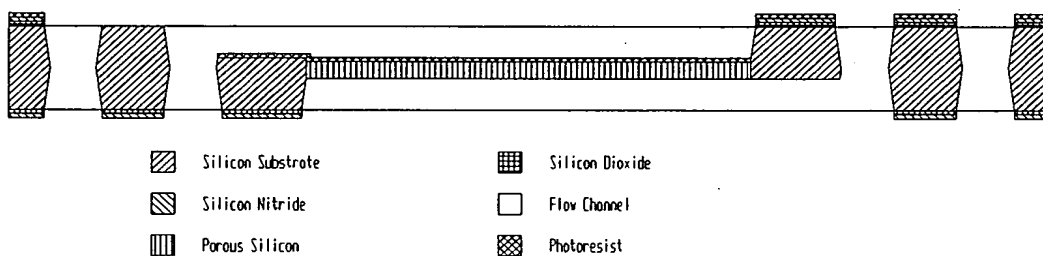


**Figure 43B**

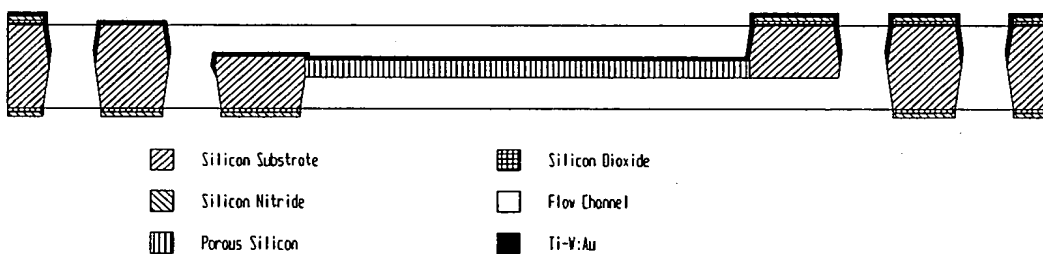




**Figure 44**



**Figure 45**



**Figure 46**

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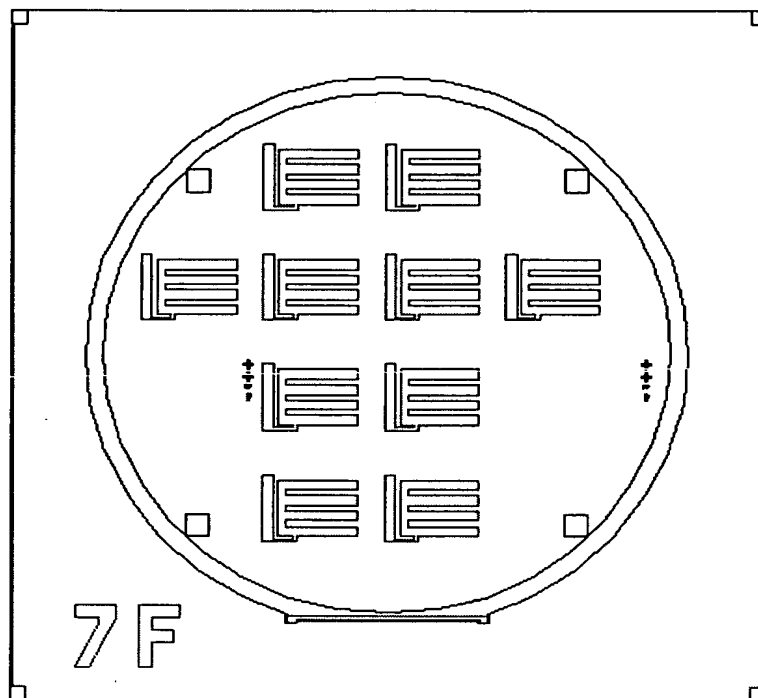


Figure 47A

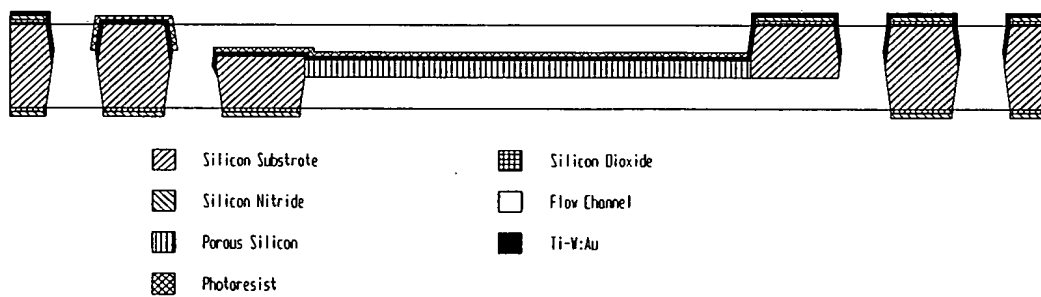
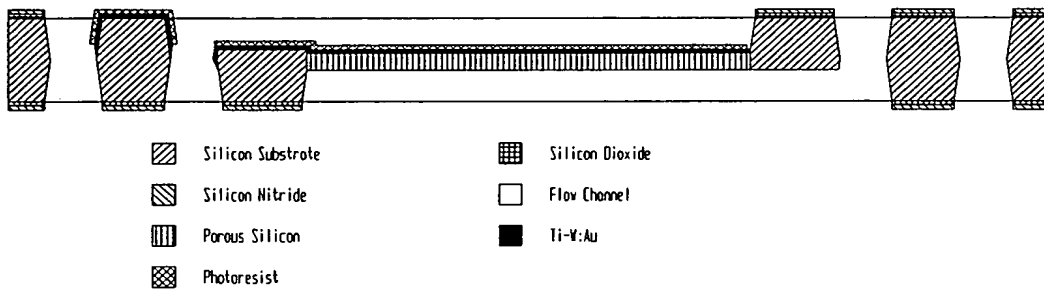
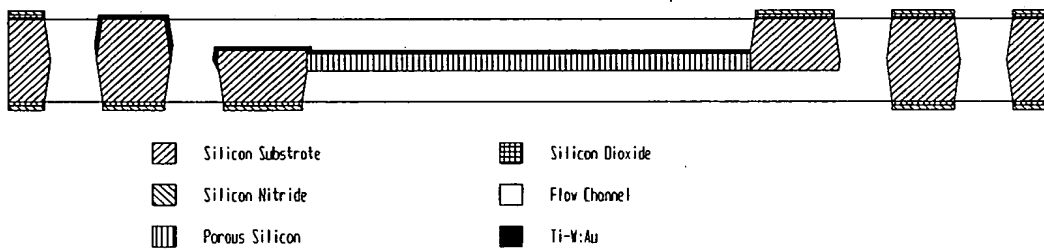


Figure 47B

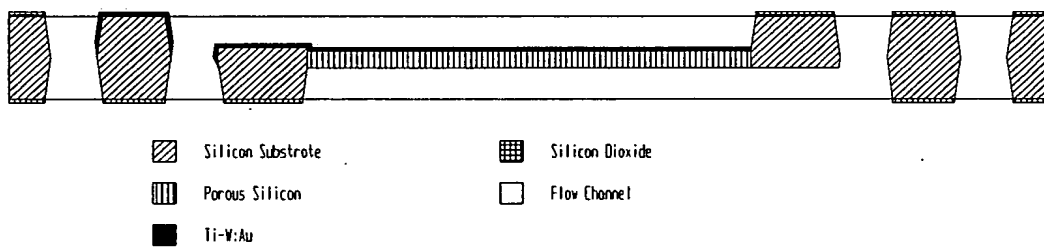
09858327.05150.1



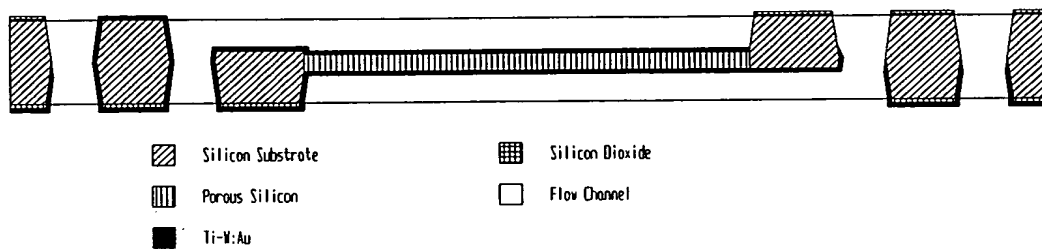
**Figure 48**



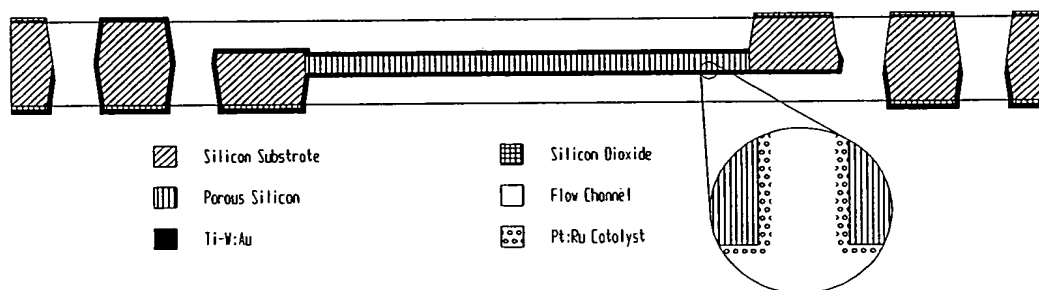
**Figure 49**



**Figure 50**

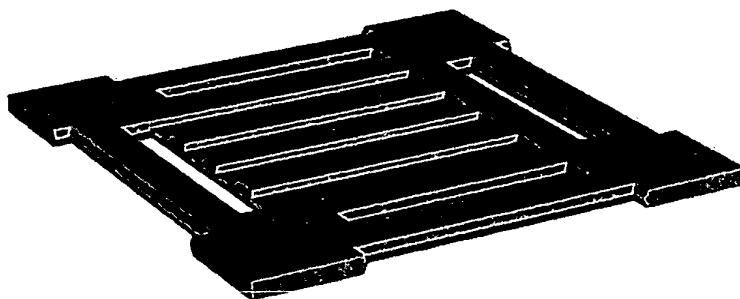


**Figure 51**

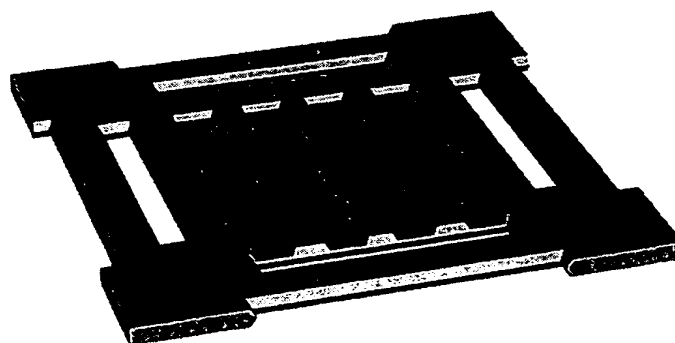


**Figure 52**

09058327.051501

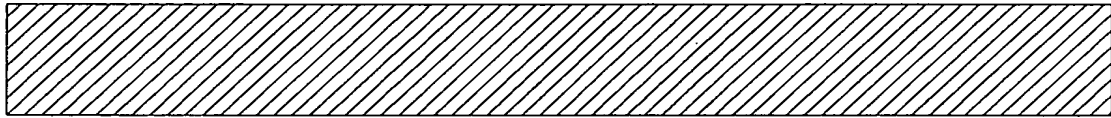



*Figure S3A*



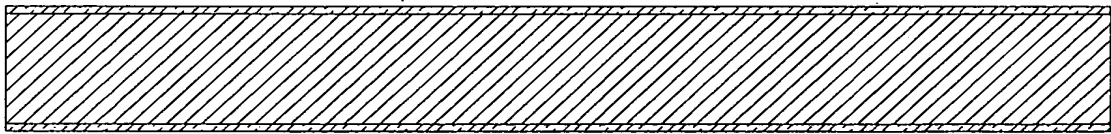
*Figure S3B*


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 Silicon Substrate

***Figure 54***



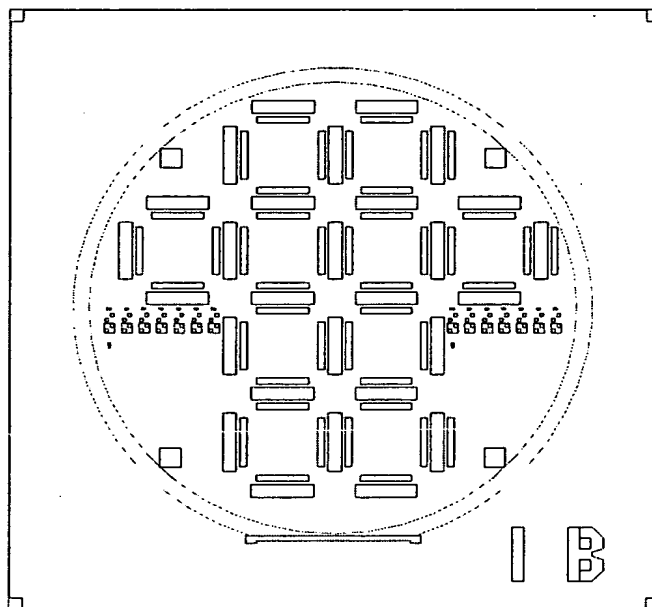
 Silicon Substrate

 Silicon Nitride

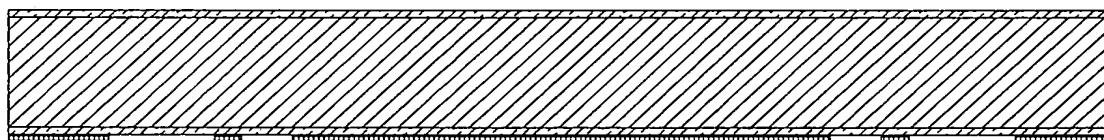
***Figure 55***




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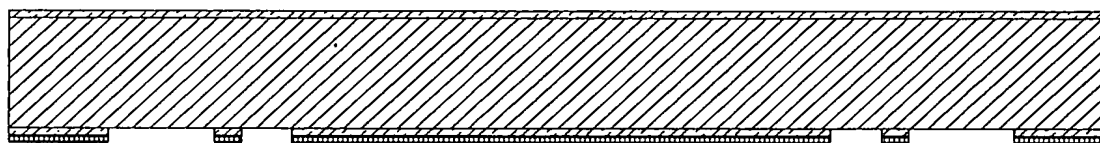
**Figure 56A**




-  Silicon Substrate
-  Silicon Nitride
-  Photo Resists


**Figure 56B**

09858327-051501

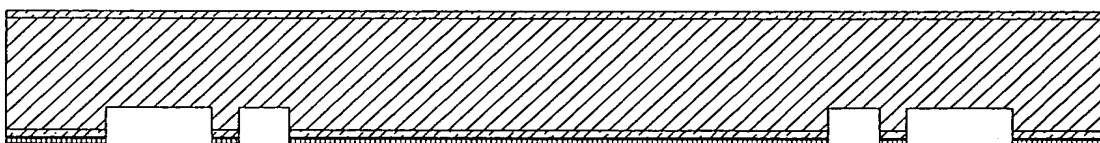



 Silicon Substrate

 Silicon Nitride


 Photo Resists

***Figure 57***



 Silicon Substrate

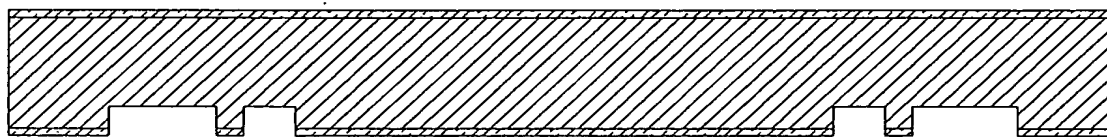
 Silicon Nitride

 Photo Resists

***Figure 58***



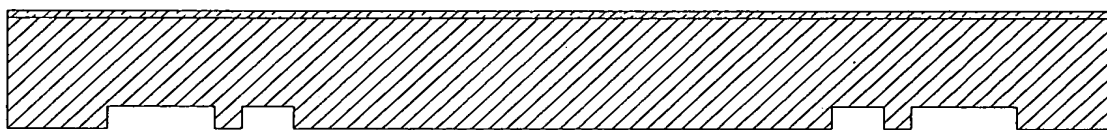
09858327-05150-1  
TOSTED 22085860



□ Silicon Substrate

▨ Silicon Nitride

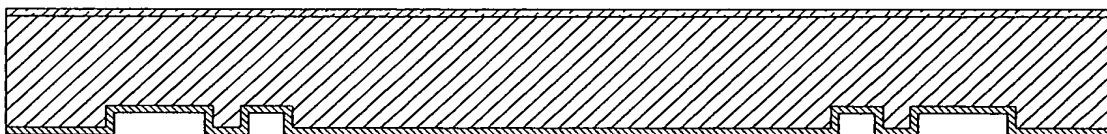
***Figure 59***



□ Silicon Substrate

▨ Silicon Nitride

***Figure 60***



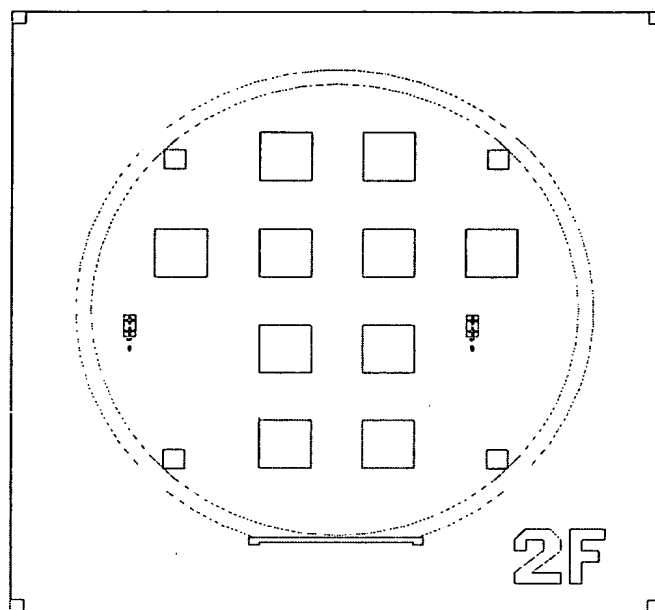
□ Silicon Substrate

▨ Silicon Nitride

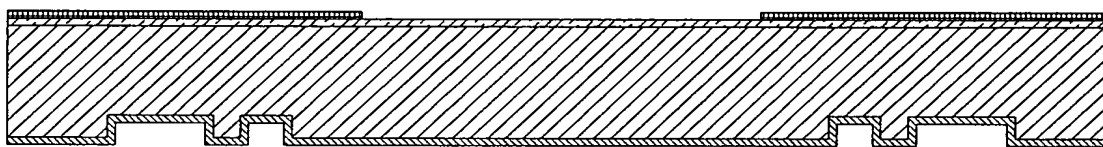
▩ Aluminum Contact





***Figure 61***

09858327 051501



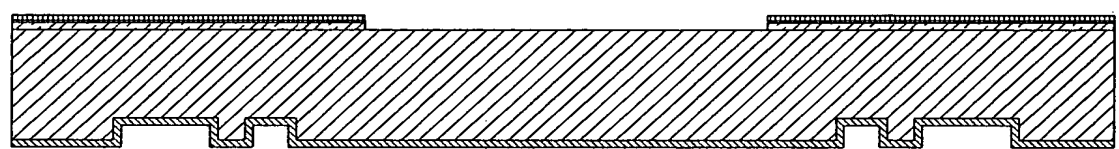
**Figure 62A**



- |   |                   |   |               |
|---|-------------------|---|---------------|
|  | Silicon Substrate |  | Photo Resists |
|  | Silicon Nitride   |   |               |
|  | Aluminum Contact  |   |               |

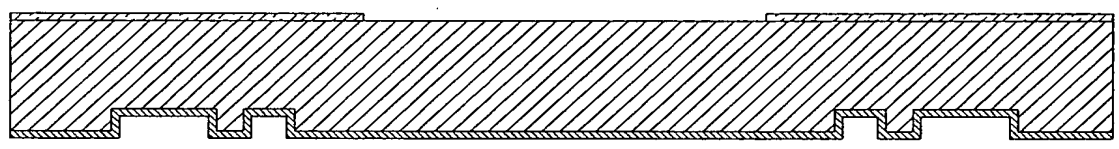
**Figure 62B**

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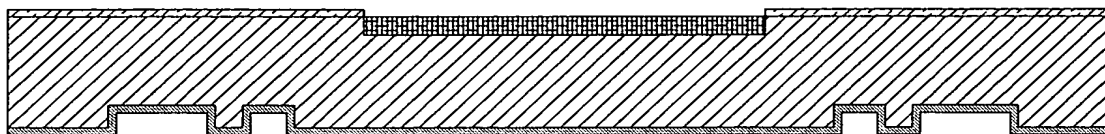
- Silicon Substrate
- Photo Resists
- Silicon Nitride
- Aluminum Contact





**Figure 63**



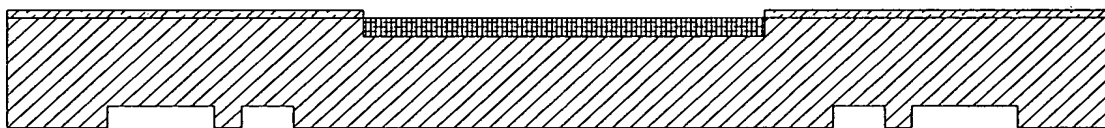
- Silicon Substrate
- Silicon Nitride
- Aluminum Contact




**Figure 64**



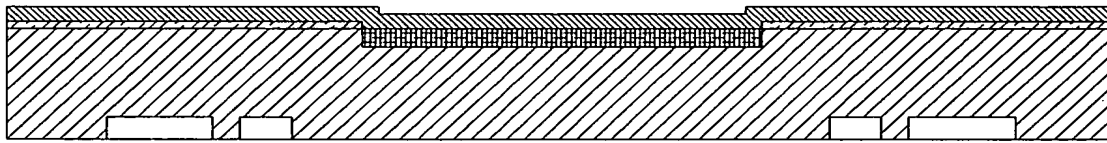
- |   |                   |   |                |
|---|-------------------|---|----------------|
|  | Silicon Substrate |  | Porous Silicon |
|  | Silicon Nitride   |   |                |
|  | Aluminum Contact  |   |                |

***Figure 65***



- |   |                   |   |                |
|---|-------------------|---|----------------|
|  | Silicon Substrate |  | Porous Silicon |
|  | Silicon Nitride   |   |                |

***Figure 66***

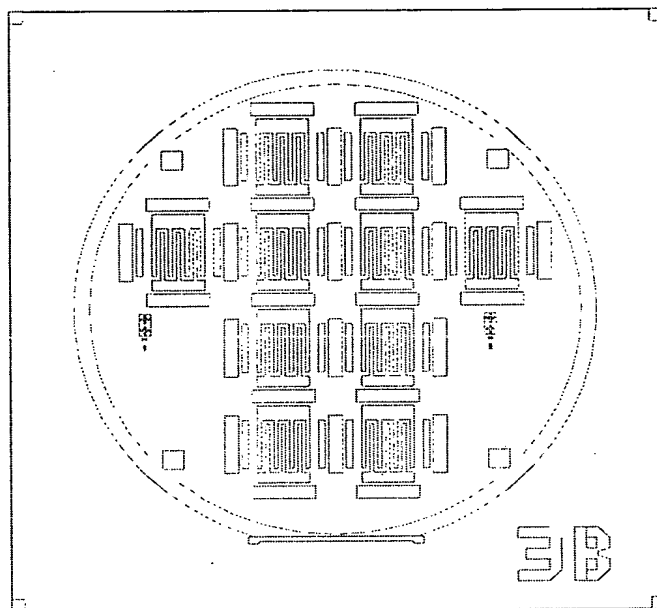


- |   |  |
|---|--|
|  Silicon Substrate |  Aluminum Contact |
|  Silicon Nitride   |  Porous Silicon   |

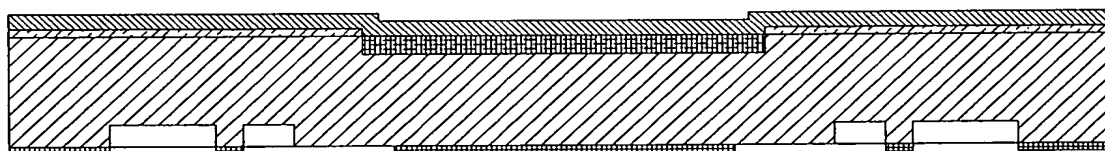
***Figure 67***






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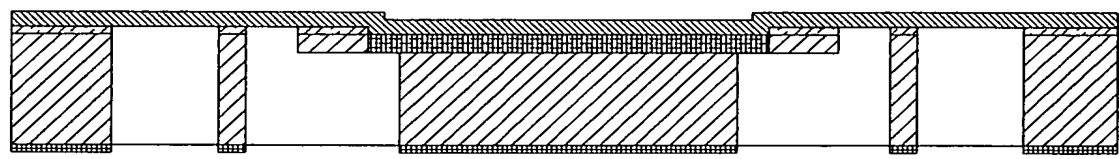
**Figure 68A**








- |   |  |
|---|--|
|  Silicon Substrate |  Aluminum Contact |
|  Silicon Nitride   |  Porous Silicon   |
|  Photo Resists     |  |

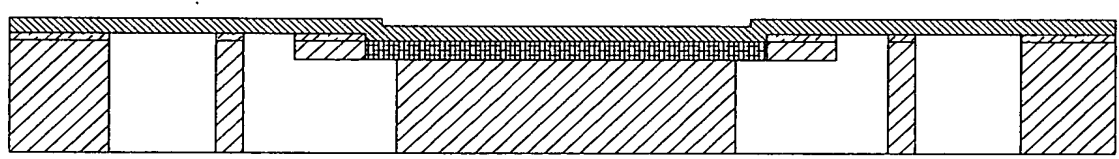
**Figure 68B**





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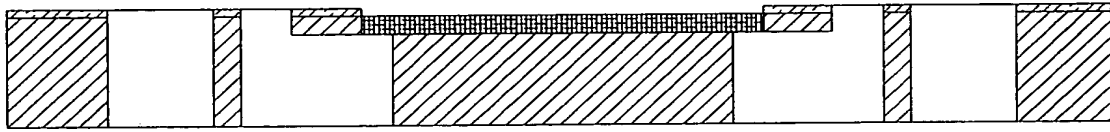
- |   |  |
|---|--|
|  Silicon Substrate |  Aluminum Contact |
|  Silicon Nitride   |  Porous Silicon   |
|  Photo Resists     |  |


**Figure 6A**





- |   |  |
|---|--|
|  Silicon Substrate |  Aluminum Contact |
|  Silicon Nitride   |  Porous Silicon   |

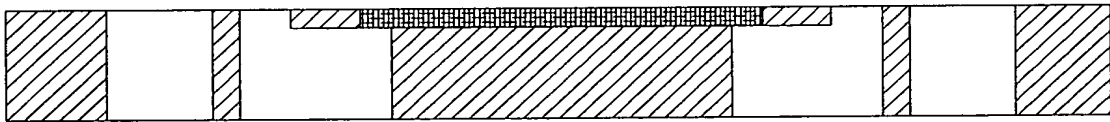
**Figure 70**





-  Silicon Substrate

 Silicon Nitride
-  Porous Silicon

***Figure 71***



-  Silicon Substrate
-  Porous Silicon

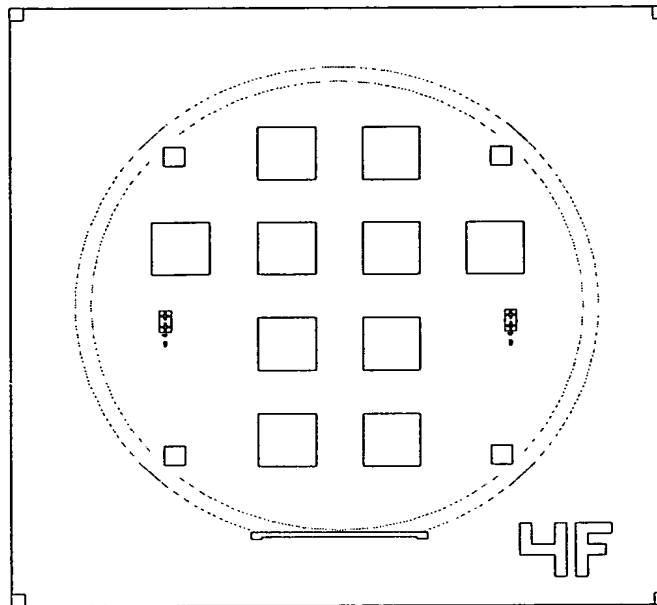
***Figure 72***

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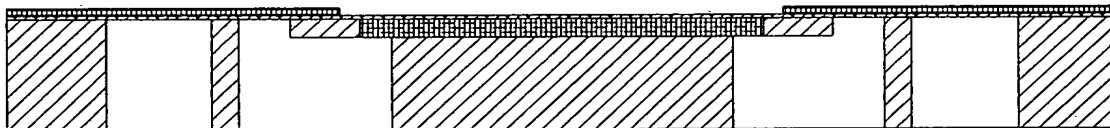








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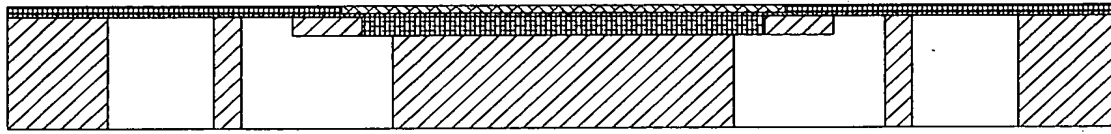






**Figure 74A**



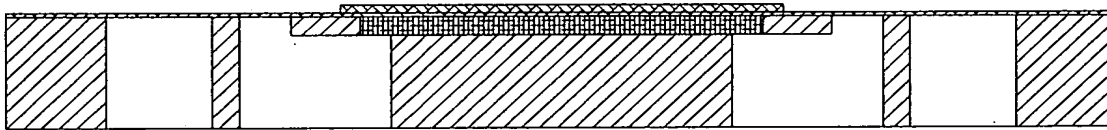
- |   |  |
|---|--|
|  Silicon Substrate |  Photo Resists  |
|  Metal Seed Layer  |  Porous Silicon |




**Figure 74B**



 Silicon Substrate       Photo Resists  
 Pd Layer       Porous Silicon

***Figure 75***

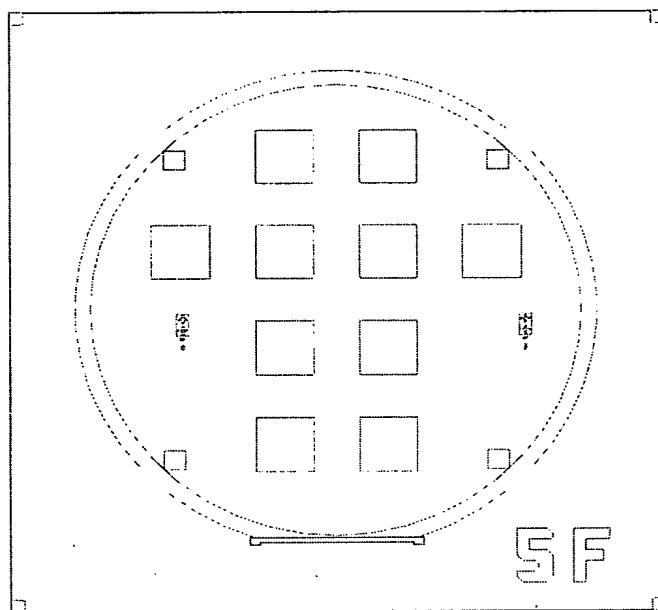


 Silicon Substrate       Porous Silicon  
 Pd Layer

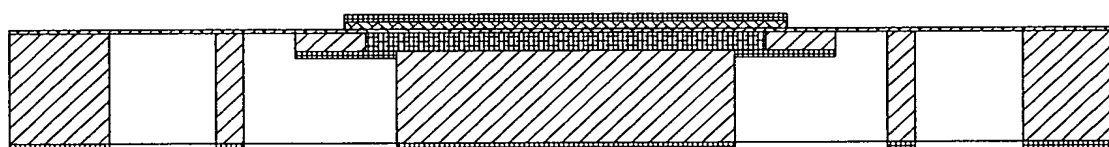
***Figure 76***





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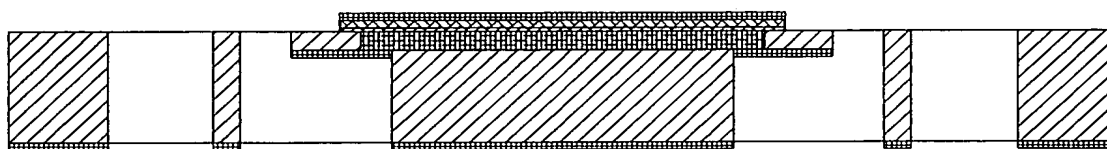
*Figure 77A*





- |   |  |
|---|--|
|  Silicon Substrate |  Porous Silicon |
|  Pd Layer          |  Photo Resists  |


*Figure 77B*


09858327-051501



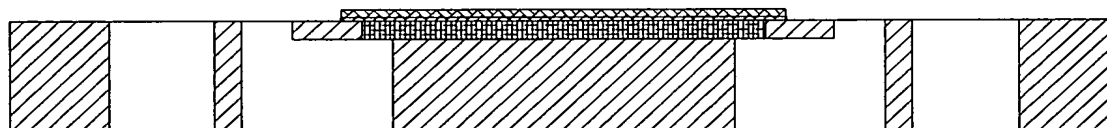
 Silicon Substrate


 Porous Silicon

 Pd Layer


 Photo Resists

**Figure 78**



 Silicon Substrate

 Porous Silicon

 Pd Layer

**Figure 79**

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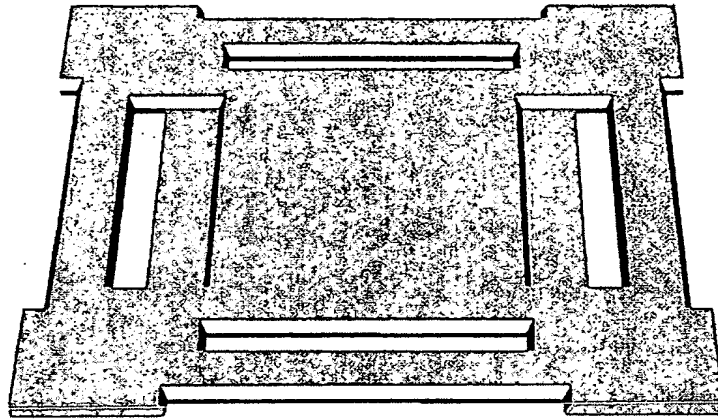


Fig. 80A

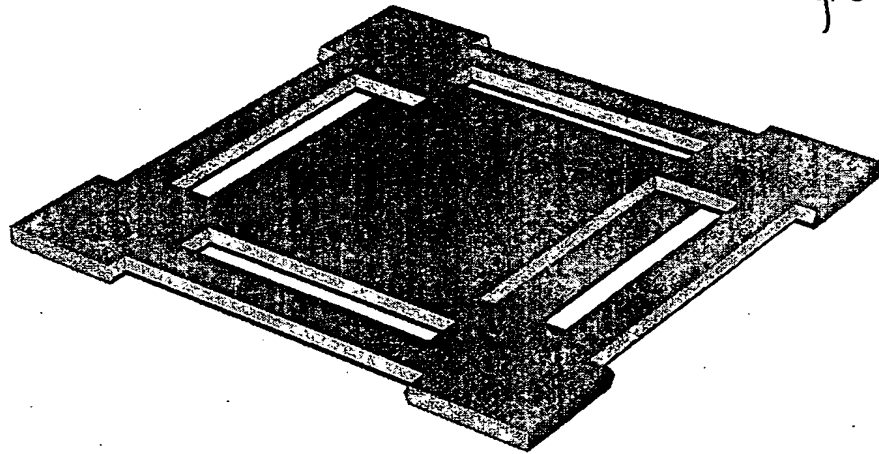


Fig. 80B

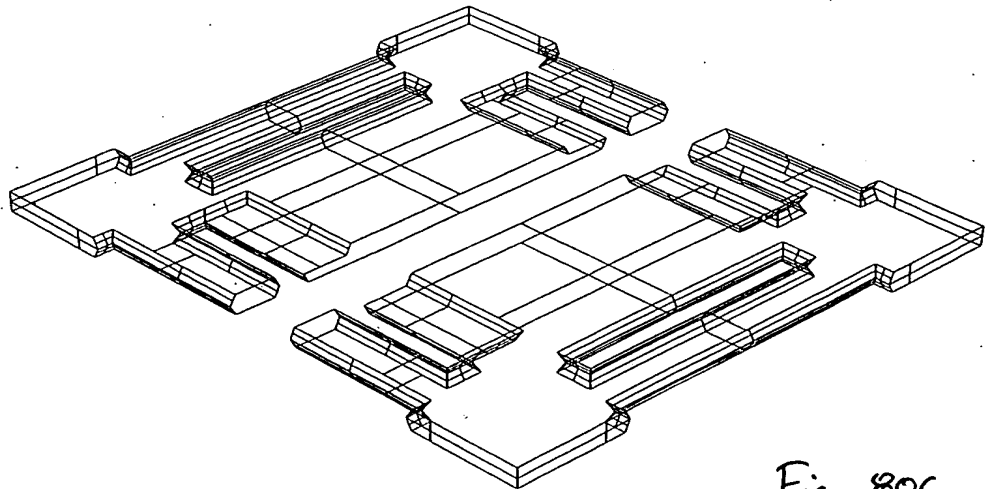
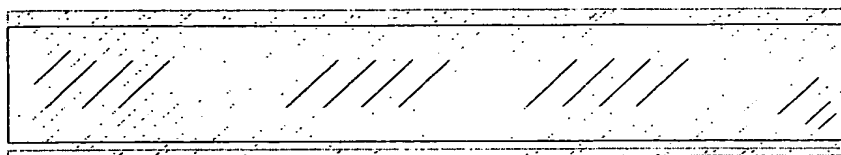
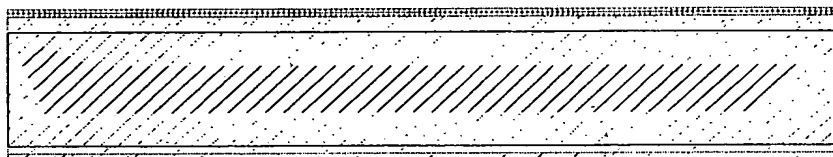


Fig. 80C



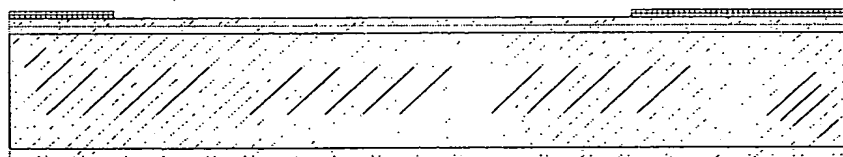
- |   |   |
|---|---|
| <input type="checkbox"/> Silicon Oxide                | <input checked="" type="checkbox"/> Silicon Nitride |
| <input checked="" type="checkbox"/> Silicon Substrate |   |

*Fig. \_\_ 81*



- |   |   |
|---|---|
| <input type="checkbox"/> Silicon Oxide                | <input type="checkbox"/> Silicon Nitride        |
| <input checked="" type="checkbox"/> Silicon Substrate | <input checked="" type="checkbox"/> Photoresist |

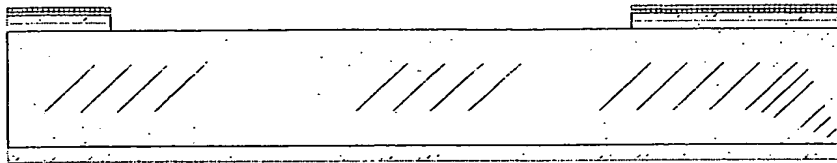
*Fig. \_\_ 82*



- |   |   |
|---|---|
| <input type="checkbox"/> Silicon Oxide                | <input checked="" type="checkbox"/> Silicon Nitride |
| <input checked="" type="checkbox"/> Silicon Substrate | <input checked="" type="checkbox"/> Photoresist     |

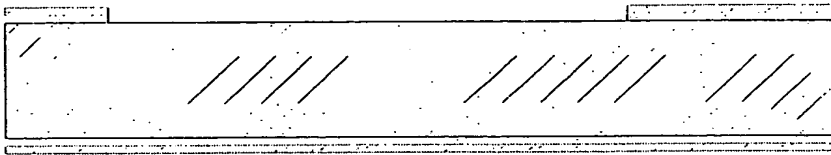
*Fig. \_\_ 83*

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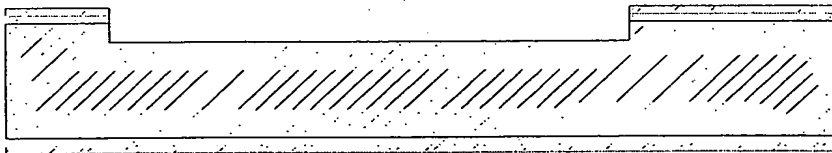
- |  |  |
|--|--|
| <input type="checkbox"/> Silicon Oxide     | <input type="checkbox"/> Silicon Nitride |
| <input type="checkbox"/> Silicon Substrate | <input type="checkbox"/> Photoresist     |

**Fig. 84**



- |  |  |
|--|--|
| <input type="checkbox"/> Silicon Oxide     | <input type="checkbox"/> Silicon Nitride |
| <input type="checkbox"/> Silicon Substrate |  |

**Fig. 85**

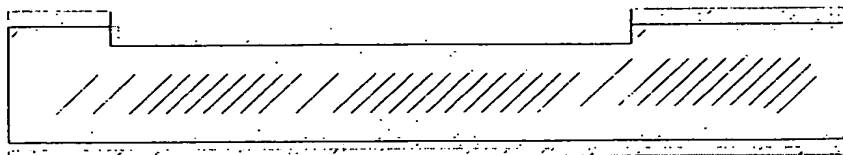


- |  |  |
|--|--|
| <input type="checkbox"/> Silicon Oxide     | <input type="checkbox"/> Silicon Nitride |
| <input type="checkbox"/> Silicon Substrate |  |

**Fig. 86**

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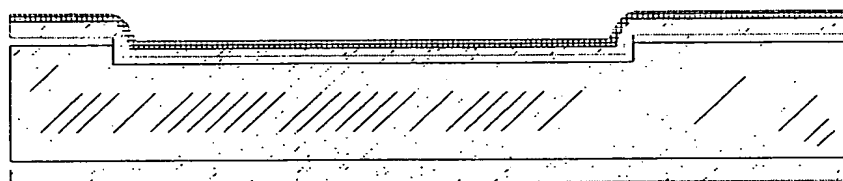


☐ Silicon Oxide

☐ Silicon Nitride

☐ Silicon Substrate

**Fig. 87**



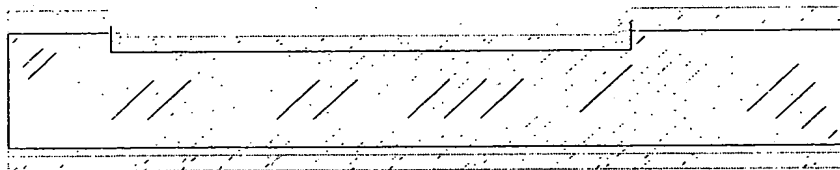
☐ Silicon Oxide

☐ Silicon Nitride

☐ Silicon Substrate

☒ Photoresist

**Fig. 88**



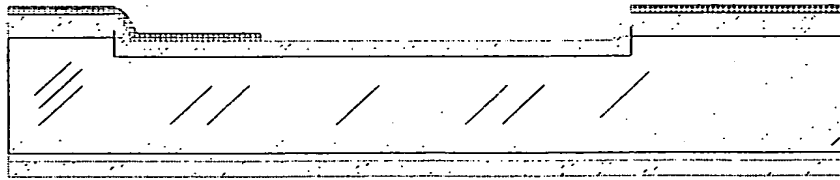
☐ Silicon Oxide

☐ Silicon Nitride

☐ Silicon Substrate

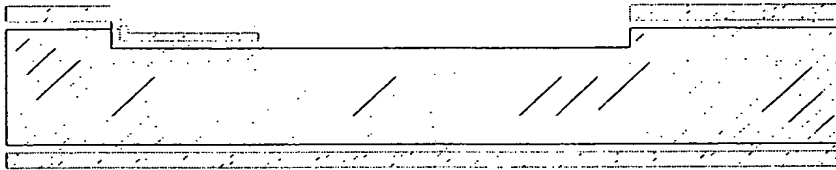
**Fig. 89**

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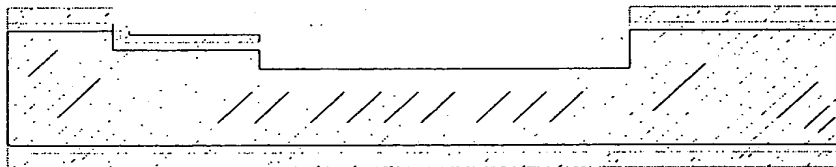
- |  |   |
|--|---|
| <input type="checkbox"/> Silicon Oxide     | <input type="checkbox"/> Silicon Nitride        |
| <input type="checkbox"/> Silicon Substrate | <input checked="" type="checkbox"/> Photoresist |

**Fig. 90**



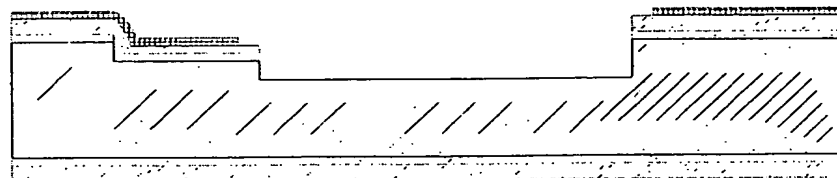
- |   |  |
|---|--|
| <input type="checkbox"/> Silicon Oxide                | <input type="checkbox"/> Silicon Nitride |
| <input checked="" type="checkbox"/> Silicon Substrate |  |

**Fig. 91**



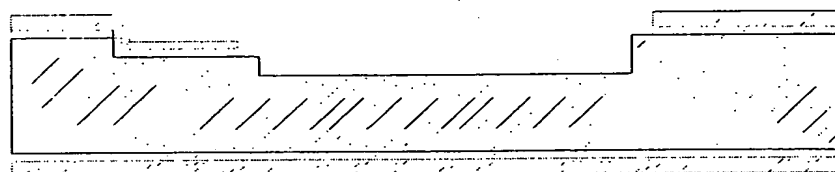
- |   |  |
|---|--|
| <input type="checkbox"/> Silicon Oxide                | <input type="checkbox"/> Silicon Nitride |
| <input checked="" type="checkbox"/> Silicon Substrate |  |

**Fig. 92**



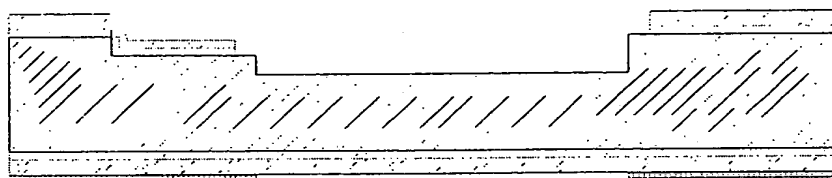
- |  |   |
|--|---|
| <input type="checkbox"/> Silicon Oxide     | <input type="checkbox"/> Silicon Nitride        |
| <input type="checkbox"/> Silicon Substrate | <input checked="" type="checkbox"/> Photoresist |

**Fig. 93**



- |  |   |
|--|---|
| <input type="checkbox"/> Silicon Oxide     | <input checked="" type="checkbox"/> Silicon Nitride |
| <input type="checkbox"/> Silicon Substrate |   |

**Fig. 94**

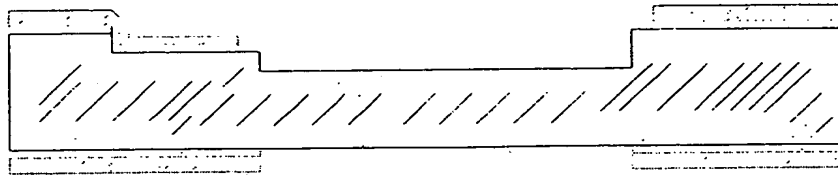


- |   |   |
|---|---|
| <input type="checkbox"/> Silicon Oxide                | <input type="checkbox"/> Silicon Nitride        |
| <input checked="" type="checkbox"/> Silicon Substrate | <input checked="" type="checkbox"/> Photoresist |

**Fig. 95**

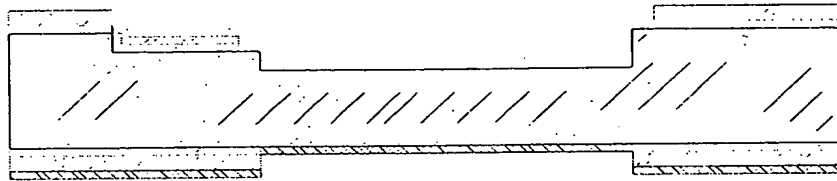
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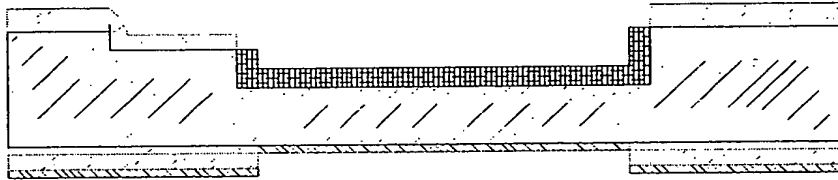
- |   |  |
|---|--|
| <input type="checkbox"/> Silicon Oxide                | <input type="checkbox"/> Silicon Nitride |
| <input checked="" type="checkbox"/> Silicon Substrate |  |

Fig. 96



- |   |  |
|---|--|
| <input type="checkbox"/> Silicon Oxide                | <input type="checkbox"/> Silicon Nitride     |
| <input checked="" type="checkbox"/> Silicon Substrate | <input checked="" type="checkbox"/> Aluminum |

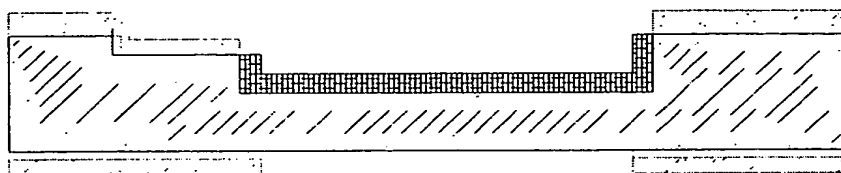
Fig. 97



- |   |  |
|---|--|
| <input type="checkbox"/> Silicon Oxide                | <input type="checkbox"/> Silicon Nitride     |
| <input checked="" type="checkbox"/> Silicon Substrate | <input checked="" type="checkbox"/> Aluminum |
| <input checked="" type="checkbox"/> Porous Silicon    |  |

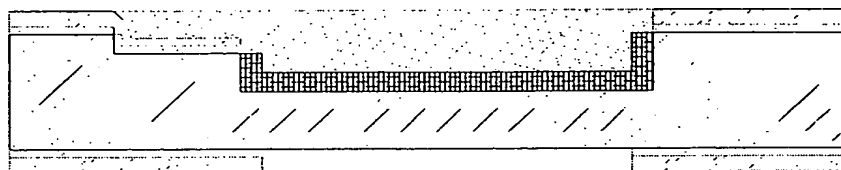
Fig. 98

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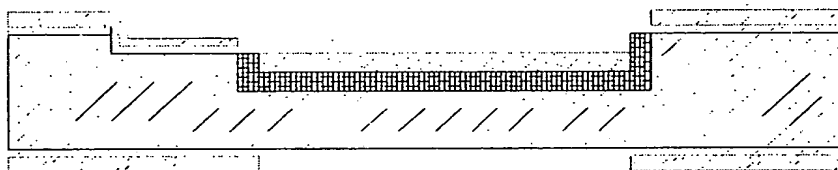
- |   |  |
|---|--|
| <input type="checkbox"/> Silicon Oxide                | <input type="checkbox"/> Silicon Nitride |
| <input checked="" type="checkbox"/> Silicon Substrate |  |
| <input checked="" type="checkbox"/> Porous Silicon    |  |

*Fig. 99*



- |   |  |
|---|--|
| <input type="checkbox"/> Silicon Oxide                | <input type="checkbox"/> Silicon Nitride |
| <input checked="" type="checkbox"/> Silicon Substrate | <input type="checkbox"/> Sol-Gel         |
| <input checked="" type="checkbox"/> Porous Silicon    |  |

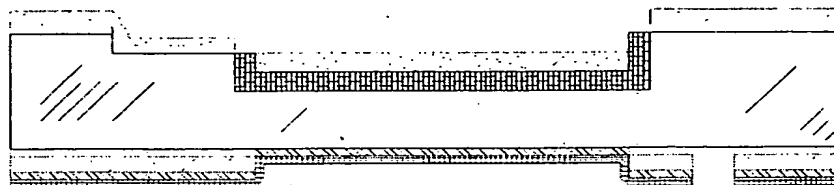
*Fig. 100*



- |   |  |
|---|--|
| <input type="checkbox"/> Silicon Oxide                | <input type="checkbox"/> Silicon Nitride |
| <input checked="" type="checkbox"/> Silicon Substrate | <input type="checkbox"/> Sol-Gel         |
| <input checked="" type="checkbox"/> Porous Silicon    |  |

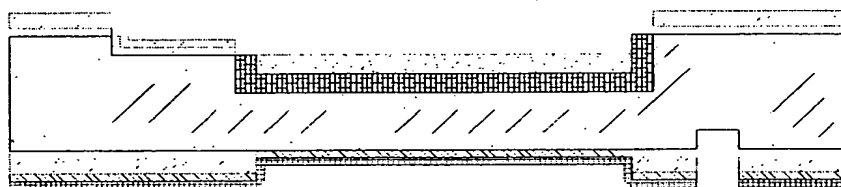
*Fig. 101*





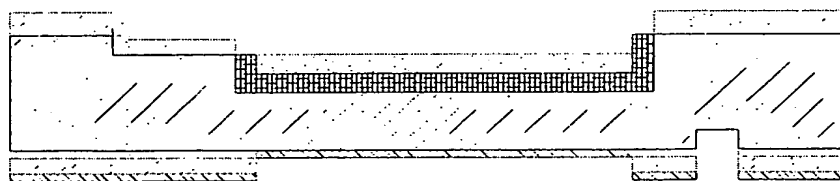
- |   |  |
|---|--|
| <input type="checkbox"/> Silicon Oxide                | <input type="checkbox"/> Silicon Nitride     |
| <input checked="" type="checkbox"/> Silicon Substrate | <input type="checkbox"/> Sol-Gel             |
| <input checked="" type="checkbox"/> Porous Silicon    | <input checked="" type="checkbox"/> Aluminum |
| <input checked="" type="checkbox"/> Photoresist       |  |

**Fig. 105**



- |   |  |
|---|--|
| <input type="checkbox"/> Silicon Oxide                | <input type="checkbox"/> Silicon Nitride     |
| <input checked="" type="checkbox"/> Silicon Substrate | <input type="checkbox"/> Sol-Gel             |
| <input checked="" type="checkbox"/> Porous Silicon    | <input checked="" type="checkbox"/> Aluminum |
| <input checked="" type="checkbox"/> Photoresist       |  |

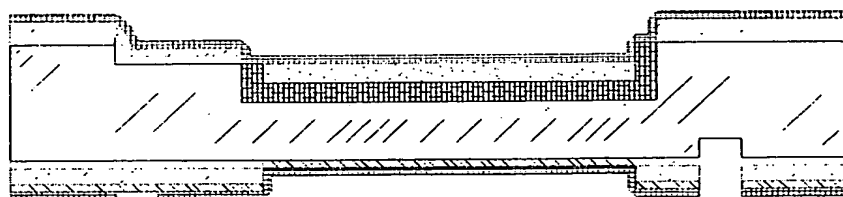
**Fig. 106**



- |  |  |
|--|--|
| <input type="checkbox"/> Silicon Oxide             | <input type="checkbox"/> Silicon Nitride     |
| <input type="checkbox"/> Silicon Substrate         | <input type="checkbox"/> Sol-Gel             |
| <input checked="" type="checkbox"/> Porous Silicon | <input checked="" type="checkbox"/> Aluminum |

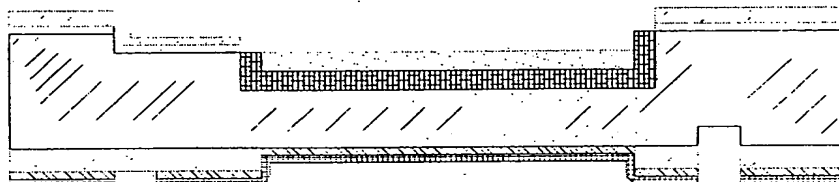
**Fig. 107**

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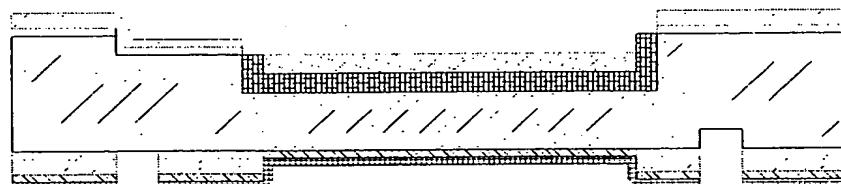
- |   |  |
|---|--|
| <input type="checkbox"/> Silicon Oxide                | <input type="checkbox"/> Silicon Nitride     |
| <input checked="" type="checkbox"/> Silicon Substrate | <input type="checkbox"/> Sol-Gel             |
| <input checked="" type="checkbox"/> Porous Silicon    | <input checked="" type="checkbox"/> Aluminum |
| <input checked="" type="checkbox"/> Photoresist       |  |

**Fig. 108**



- |   |  |
|---|--|
| <input type="checkbox"/> Silicon Oxide                | <input type="checkbox"/> Silicon Nitride     |
| <input checked="" type="checkbox"/> Silicon Substrate | <input type="checkbox"/> Sol-Gel             |
| <input checked="" type="checkbox"/> Porous Silicon    | <input checked="" type="checkbox"/> Aluminum |
| <input checked="" type="checkbox"/> Photoresist       |  |

**Fig. 109**

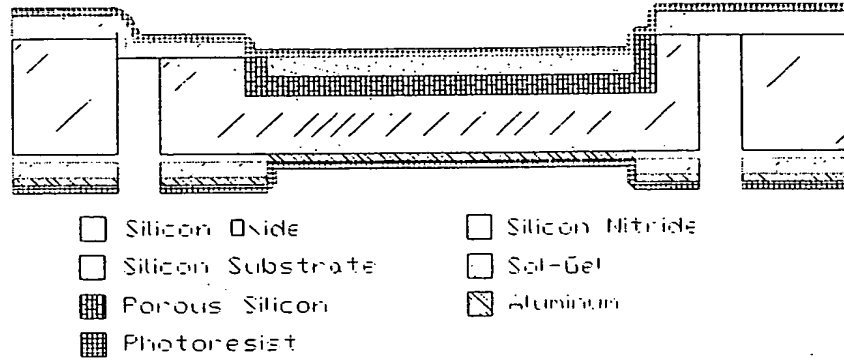


- |   |  |
|---|--|
| <input type="checkbox"/> Silicon Oxide                | <input type="checkbox"/> Silicon Nitride     |
| <input checked="" type="checkbox"/> Silicon Substrate | <input type="checkbox"/> Sol-Gel             |
| <input checked="" type="checkbox"/> Porous Silicon    | <input checked="" type="checkbox"/> Aluminum |
| <input checked="" type="checkbox"/> Photoresist       |  |

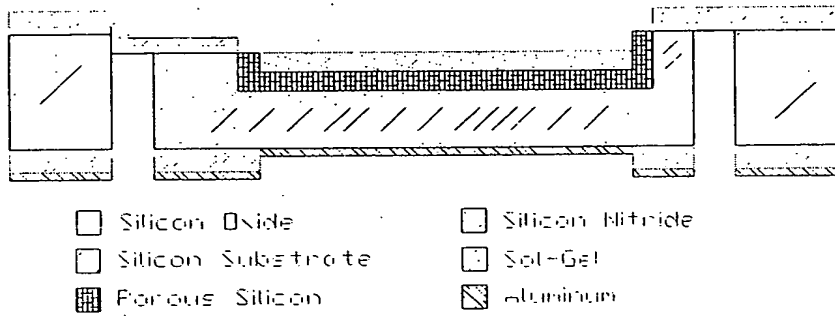
**Fig. 110**



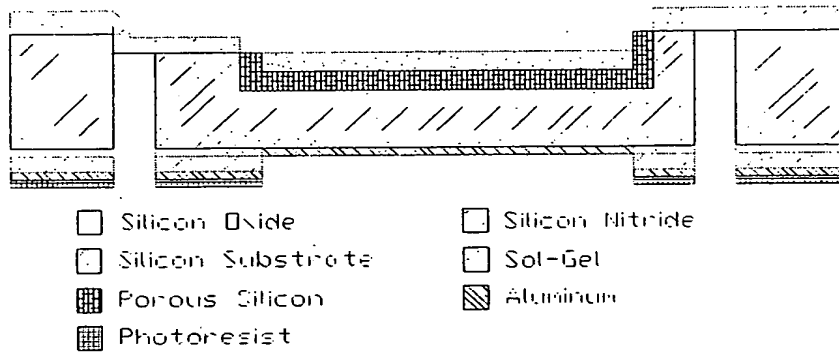
09858327.051501



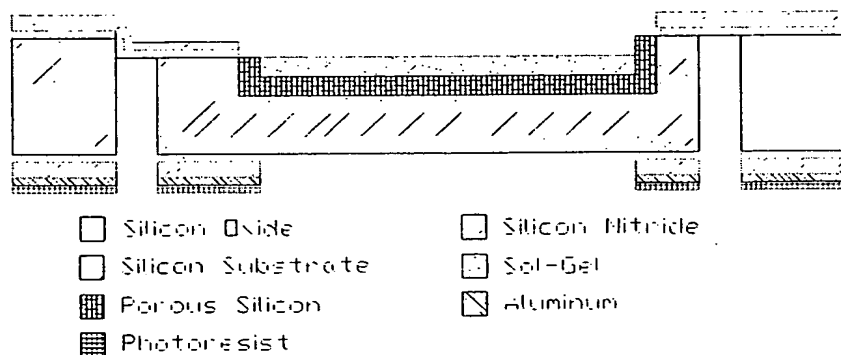
*Fig. 111*



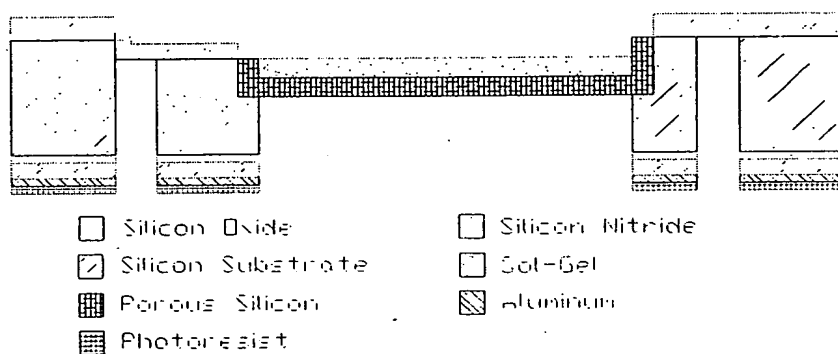
*Fig. 112*



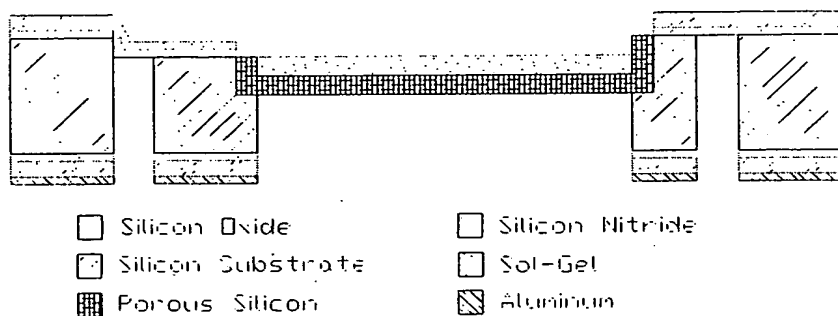
*Fig. 113*



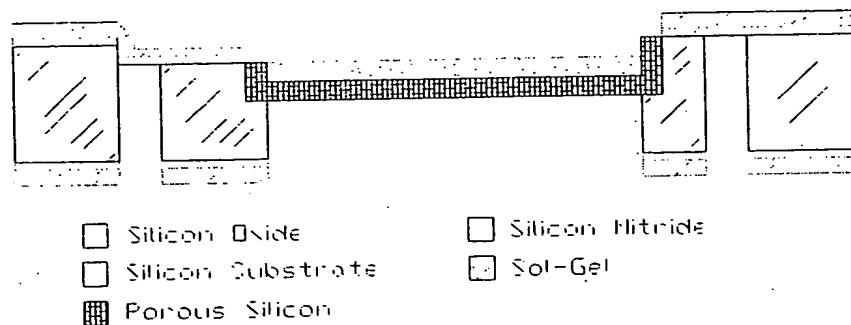
**Fig. 114**



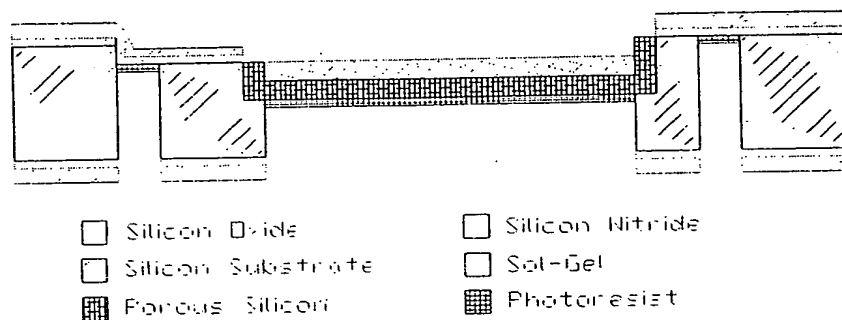
**Fig. 115**



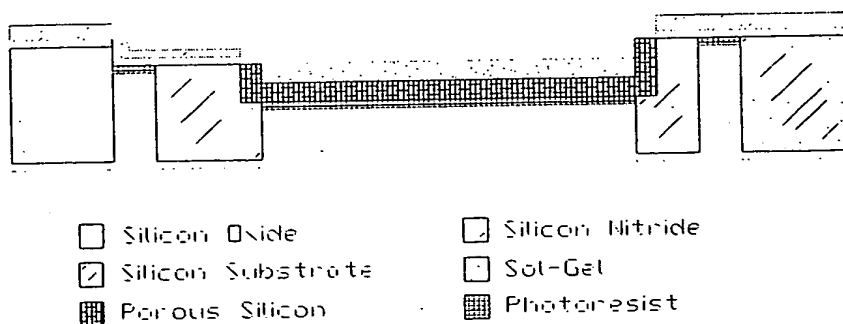
**Fig. 116**



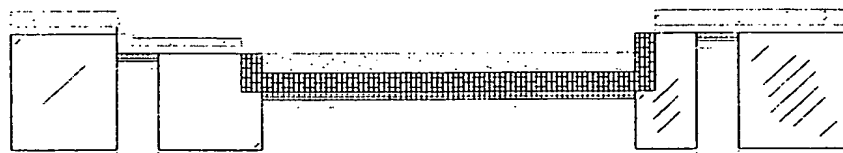
**Fig. 117**



**Fig. 118**

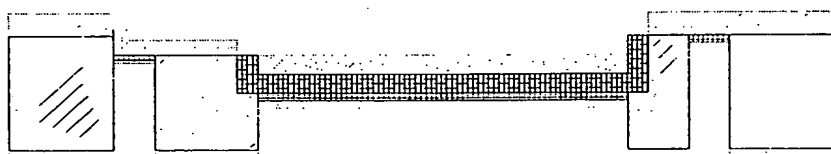


**Fig. 119**



- |  |  |
|--|--|
| <input type="checkbox"/> Silicon Oxide             | <input type="checkbox"/> Silicon Nitride         |
| <input type="checkbox"/> Silicon Substrate         | <input type="checkbox"/> Sol-Gel                 |
| <input checked="" type="checkbox"/> Porous Silicon | <input checked="" type="checkbox"/> Photorealist |
| <input type="checkbox"/> Titanium                  |  |

**Fig. 120**



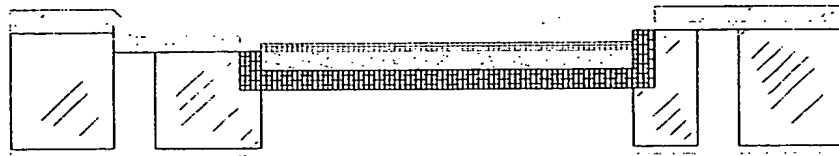
- |  |  |
|--|--|
| <input type="checkbox"/> Silicon Oxide             | <input type="checkbox"/> Silicon Nitride         |
| <input type="checkbox"/> Silicon Substrate         | <input type="checkbox"/> Sol-Gel                 |
| <input checked="" type="checkbox"/> Porous Silicon | <input checked="" type="checkbox"/> Photorealist |
| <input type="checkbox"/> Titanium                  | <input type="checkbox"/> Gold                    |

**Fig. 121**



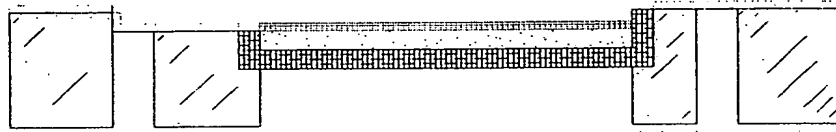
- |   |  |
|---|--|
| <input type="checkbox"/> Silicon Oxide                | <input type="checkbox"/> Silicon Nitride |
| <input checked="" type="checkbox"/> Silicon Substrate | <input type="checkbox"/> Sol-Gel         |
| <input checked="" type="checkbox"/> Porous Silicon    | <input type="checkbox"/> Gold            |
| <input type="checkbox"/> Titanium                     |  |

**Fig. 122**



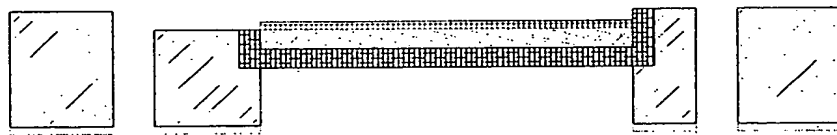
- |  |   |
|--|---|
| <input type="checkbox"/> Silicon Oxide             | <input type="checkbox"/> Silicon Nitride        |
| <input type="checkbox"/> Silicon Substrate         | <input type="checkbox"/> Sol-Gel                |
| <input checked="" type="checkbox"/> Porous Silicon | <input type="checkbox"/> Gold                   |
| <input type="checkbox"/> Titanium                  | <input checked="" type="checkbox"/> Photoresist |

**Fig. 123**



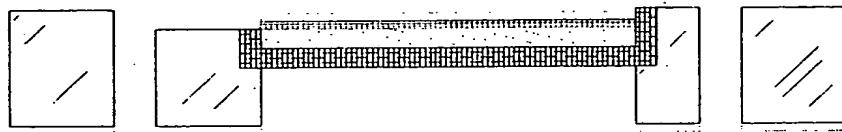
- |  |   |
|--|---|
| <input type="checkbox"/> Silicon Oxide             | <input type="checkbox"/> Sol-Gel                |
| <input type="checkbox"/> Silicon Substrate         | <input type="checkbox"/> Gold                   |
| <input checked="" type="checkbox"/> Porous Silicon | <input checked="" type="checkbox"/> Photoresist |
| <input type="checkbox"/> Titanium                  |   |

**Fig. 124**



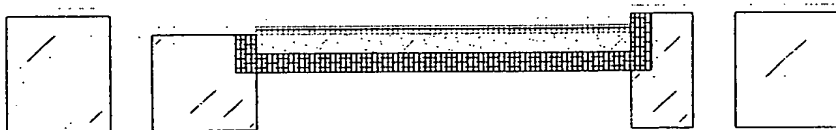
- |   |   |
|---|---|
| <input type="checkbox"/> Silicon Oxide                | <input type="checkbox"/> Sol-Gel                |
| <input checked="" type="checkbox"/> Silicon Substrate | <input type="checkbox"/> Gold                   |
| <input checked="" type="checkbox"/> Porous Silicon    | <input checked="" type="checkbox"/> Photoresist |
| <input type="checkbox"/> Titanium                     |   |

**Fig. 125**



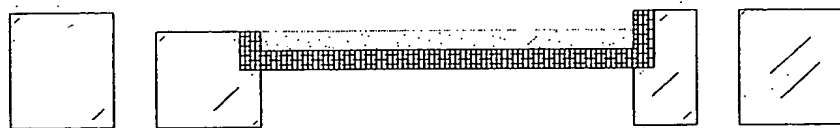
- |   |   |
|---|---|
| <input type="checkbox"/> Silicon Oxide                | <input type="checkbox"/> Sol-Gel                |
| <input checked="" type="checkbox"/> Silicon Substrate | <input type="checkbox"/> Gold                   |
| <input checked="" type="checkbox"/> Porous Silicon    | <input checked="" type="checkbox"/> Photoresist |
| <input type="checkbox"/> Titanium                     |   |

**Fig. 126**



- |  |   |
|--|---|
| <input type="checkbox"/> Silicon Oxide             | <input type="checkbox"/> Sol-Gel                |
| <input type="checkbox"/> Silicon Substrate         | <input type="checkbox"/> Gold                   |
| <input checked="" type="checkbox"/> Porous Silicon | <input checked="" type="checkbox"/> Photoresist |
| <input type="checkbox"/> Titanium                  |   |

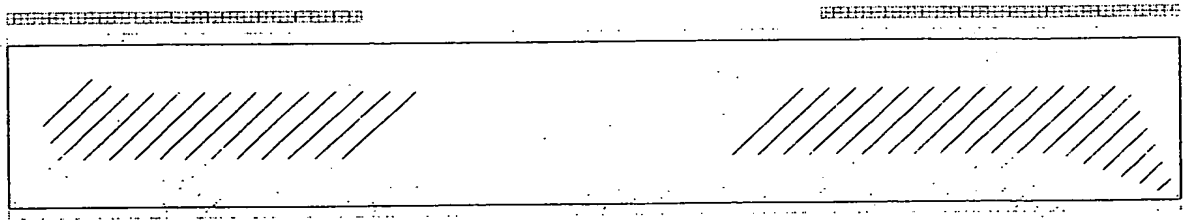
**Fig. 127**



- |   |                                   |
|---|-----------------------------------|
| <input type="checkbox"/> Silicon Oxide                | <input type="checkbox"/> Titanium |
| <input checked="" type="checkbox"/> Silicon Substrate | <input type="checkbox"/> Sol-Gel  |
| <input checked="" type="checkbox"/> Porous Silicon    | <input type="checkbox"/> Gold     |

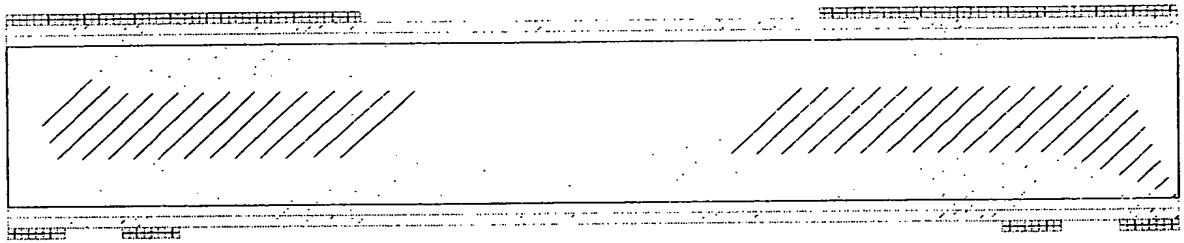
**Fig. 128**

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- |   |  |
|---|--|
| <input type="checkbox"/> Silicon Oxide                | <input type="checkbox"/> Silicon Nitride |
| <input checked="" type="checkbox"/> Silicon Substrate |  |
| <input checked="" type="checkbox"/> Photoresist       |  |

**Fig. \_\_\_\_\_ 129**

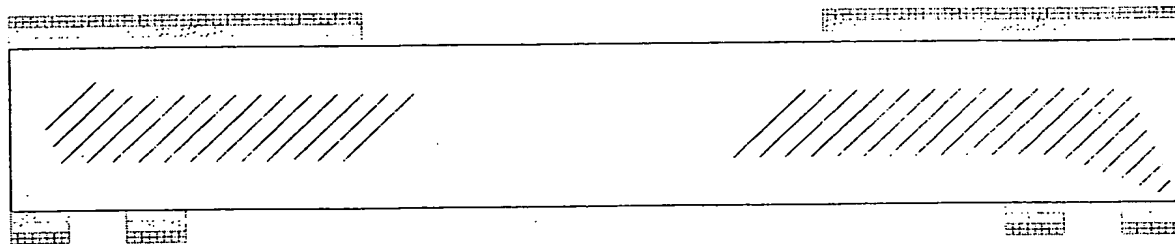


- |   |   |
|---|---|
| <input type="checkbox"/> Silicon Oxide                | <input checked="" type="checkbox"/> Silicon Nitride |
| <input checked="" type="checkbox"/> Silicon Substrate |   |
| <input checked="" type="checkbox"/> Photoresist       |   |

**Fig. \_\_\_\_\_ 130**

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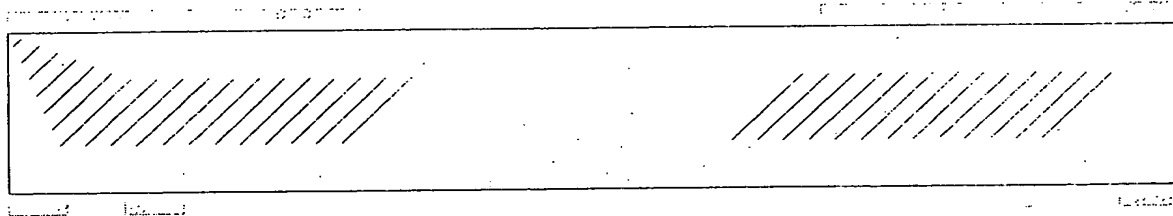
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- ☐ Silicon Oxide
- ☒ Silicon Substrate
- ☐ Photoresist

☐ Silicon Nitride

**Fig. 131**



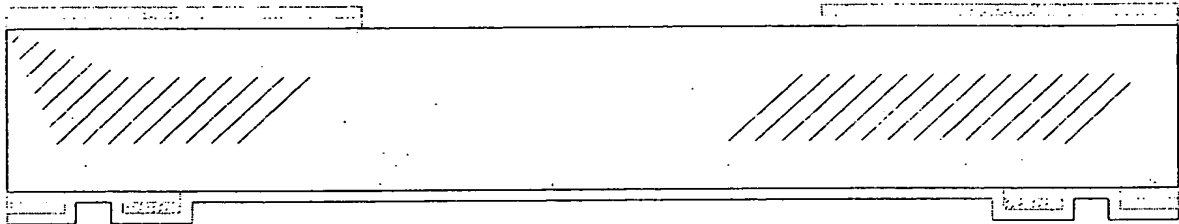
- ☐ Silicon Oxide
- ☒ Silicon Substrate

☒ Silicon Nitride

**Fig. 132**

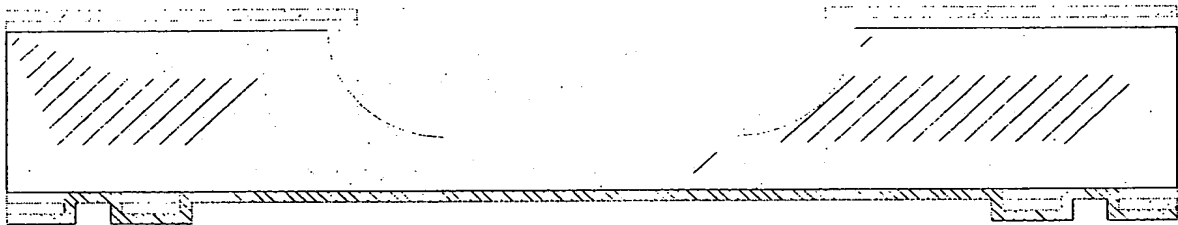


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- |   |  |
|---|--|
| <input type="checkbox"/> Silicon Oxide                | <input type="checkbox"/> Silicon Nitride |
| <input checked="" type="checkbox"/> Silicon Substrate | <input type="checkbox"/> Aluminum        |

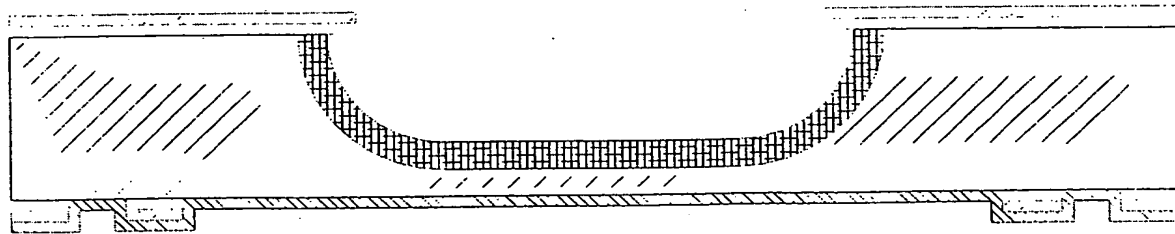
*Fig. 133*



- |   |  |
|---|--|
| <input type="checkbox"/> Silicon Oxide                | <input type="checkbox"/> Silicon Nitride     |
| <input checked="" type="checkbox"/> Silicon Substrate | <input checked="" type="checkbox"/> Aluminum |

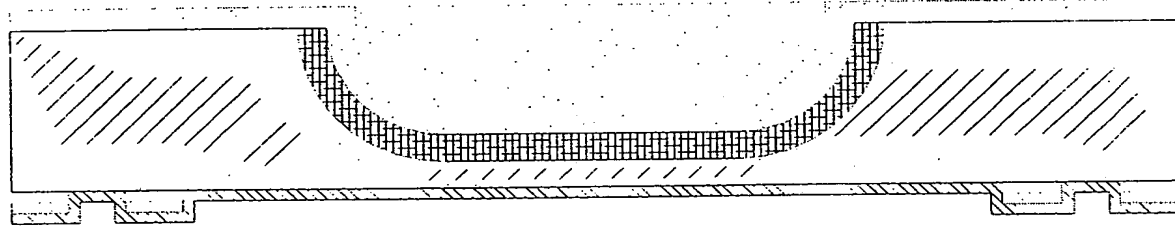
*Fig. 134*

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- |   |  |
|---|--|
| <input type="checkbox"/> Silicon Oxide                | <input type="checkbox"/> Silicon Nitride     |
| <input checked="" type="checkbox"/> Silicon Substrate | <input checked="" type="checkbox"/> Aluminum |
| <input checked="" type="checkbox"/> Porous Silicon    |  |

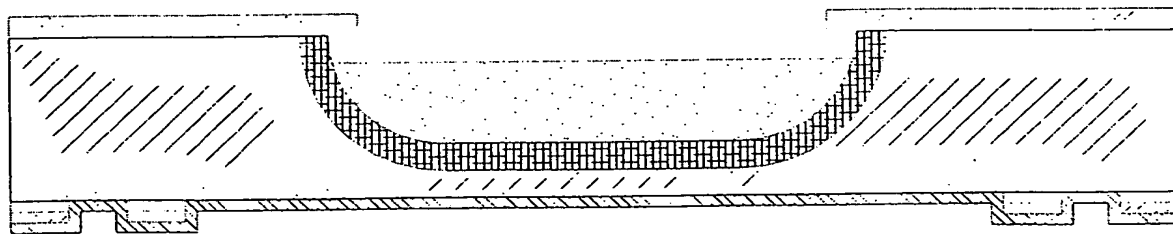
**Fig. 135**



- |   |  |
|---|--|
| <input type="checkbox"/> Silicon Oxide                | <input type="checkbox"/> Silicon Nitride     |
| <input checked="" type="checkbox"/> Silicon Substrate | <input checked="" type="checkbox"/> Aluminum |
| <input checked="" type="checkbox"/> Porous Silicon    |  |
| <input checked="" type="checkbox"/> Sol-Gel           |  |

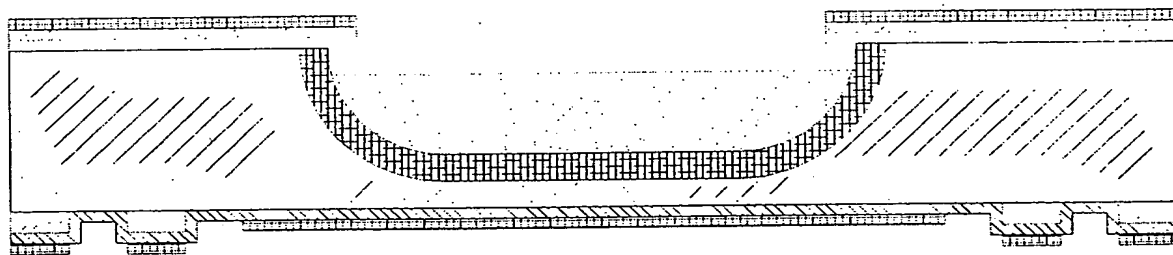
**Fig. 136**

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- |   |  |
|---|--|
| <input type="checkbox"/> Silicon Oxide                | <input type="checkbox"/> Silicon Nitride     |
| <input checked="" type="checkbox"/> Silicon Substrate | <input checked="" type="checkbox"/> Aluminum |
| <input checked="" type="checkbox"/> Porous Silicon    |  |
| <input type="checkbox"/> Sol-Gel                      |  |

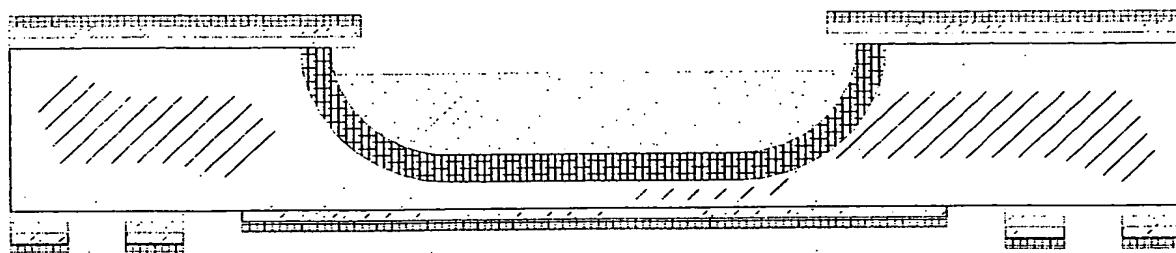
*Fig.* \_\_\_\_\_ 137



- |   |  |
|---|--|
| <input type="checkbox"/> Silicon Oxide                | <input type="checkbox"/> Silicon Nitride     |
| <input checked="" type="checkbox"/> Silicon Substrate | <input checked="" type="checkbox"/> Aluminum |
| <input checked="" type="checkbox"/> Porous Silicon    | <input checked="" type="checkbox"/>          |
| <input type="checkbox"/> Sol-Gel                      |  |

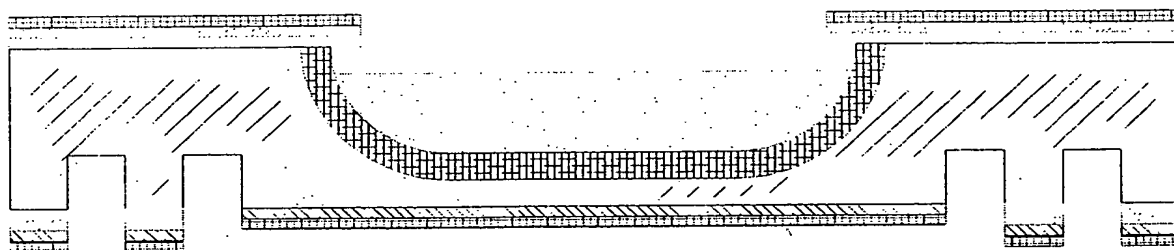
*Fig.* \_\_\_\_\_ 138

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- |  |  |
|--|--|
| <input type="checkbox"/> Silicon Oxide     | <input type="checkbox"/> Silicon Nitride |
| <input type="checkbox"/> Silicon Substrate | <input type="checkbox"/> Aluminum        |
| <input type="checkbox"/> Porous Silicon    | <input type="checkbox"/>                 |
| <input type="checkbox"/> Sol-Gel           |  |

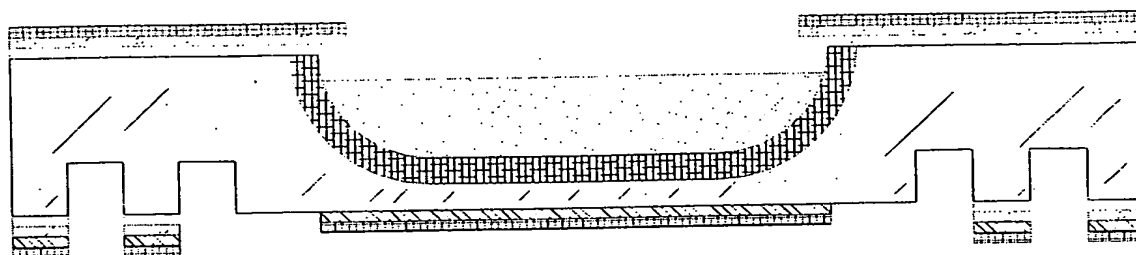
*Fig. 139*



- |  |  |
|--|--|
| <input type="checkbox"/> Silicon Oxide     | <input type="checkbox"/> Silicon Nitride |
| <input type="checkbox"/> Silicon Substrate | <input type="checkbox"/> Aluminum        |
| <input type="checkbox"/> Porous Silicon    | <input type="checkbox"/>                 |
| <input type="checkbox"/> Sol-Gel           |  |

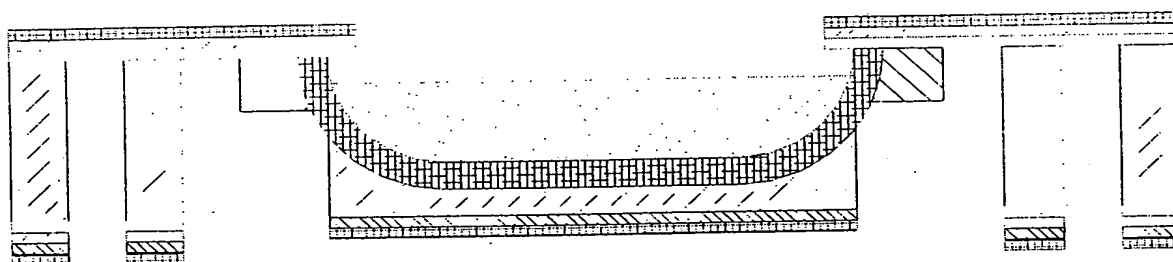
*Fig. 140*

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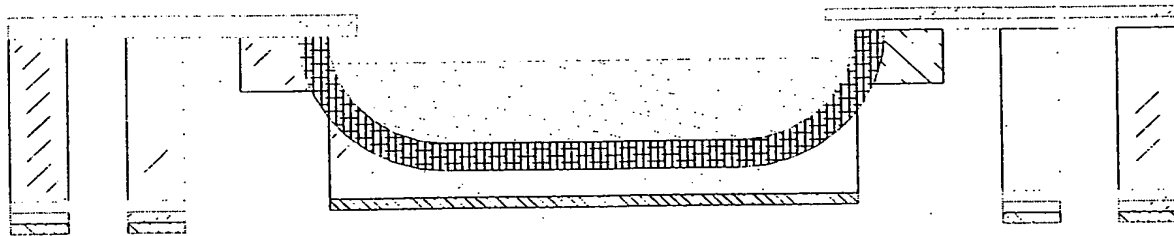
- |                   |                 |
|-------------------|-----------------|
| Silicon Oxide     | Silicon Nitride |
| Silicon Substrate | Aluminum        |
| Porous Silicon    | Photoresist     |
| Sol-Gel           |                 |






**Fig. 141**



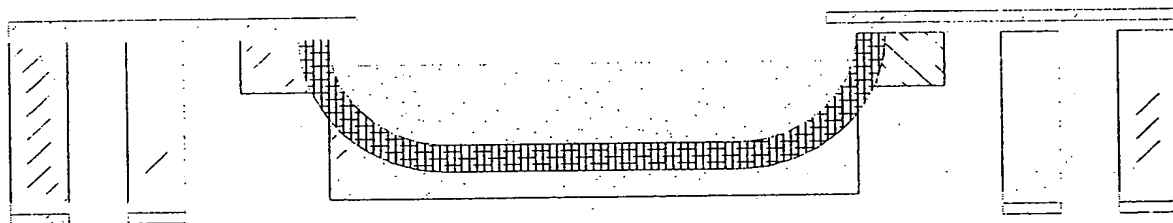
- |                   |                 |
|-------------------|-----------------|
| Silicon Oxide     | Silicon Nitride |
| Silicon Substrate | Aluminum        |
| Porous Silicon    | Photoresist     |
| Sol-Gel           |                 |





**Fig. 142**



- |   |   |
|---|---|
|  Silicon Oxide     |  Silicon Nitride |
|  Silicon Substrate |  Aluminum        |
|  Porous Silicon    |   |

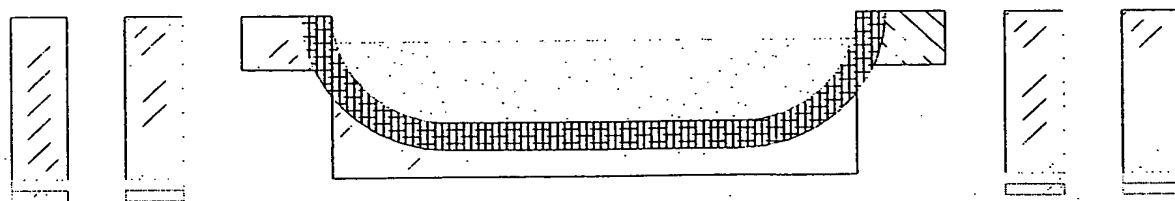
**Fig. 143**



- |   |   |
|---|---|
|  Silicon Oxide     |  Silicon Nitride |
|  Silicon Substrate |   |
|  Porous Silicon    |   |

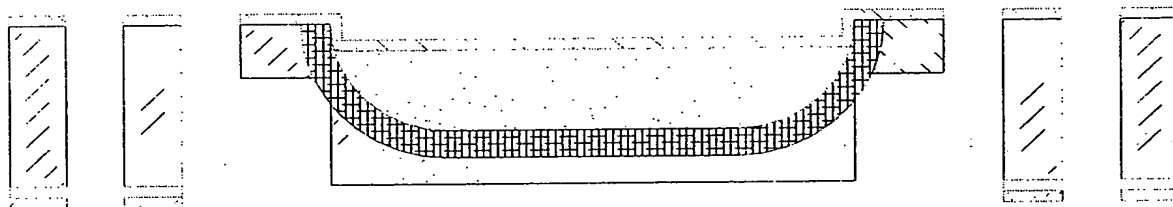
**Fig. 144**

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- |                   |                 |
|-------------------|-----------------|
| Silicon Oxide     | Silicon Nitride |
| Silicon Substrate |                 |
| Porous Silicon    |                 |

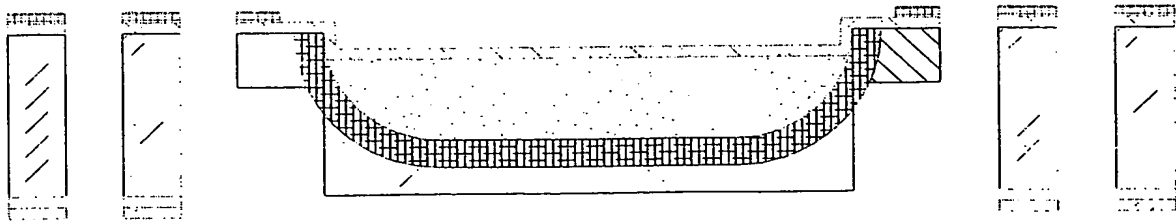
*Fig. 145*









- |                   |                 |
|-------------------|-----------------|
| Silicon Oxide     | Silicon Nitride |
| Silicon Substrate | Palladium       |
| Porous Silicon    |                 |

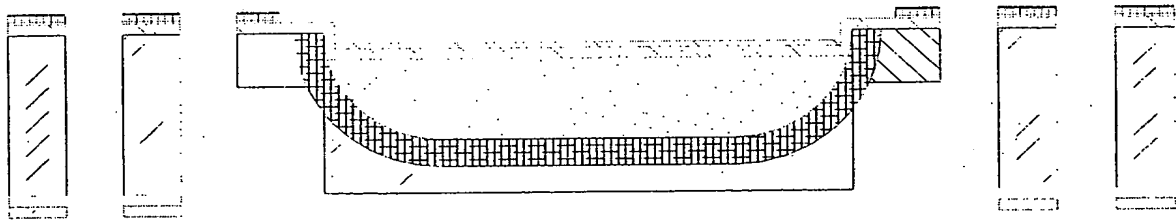
*Fig. 146*







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- |   |   |
|---|---|
|  Silicon Oxide     |  Silicon Nitride |
|  Silicon Substrate |  Palladium       |
|  Porous Silicon    |  Photoresist     |

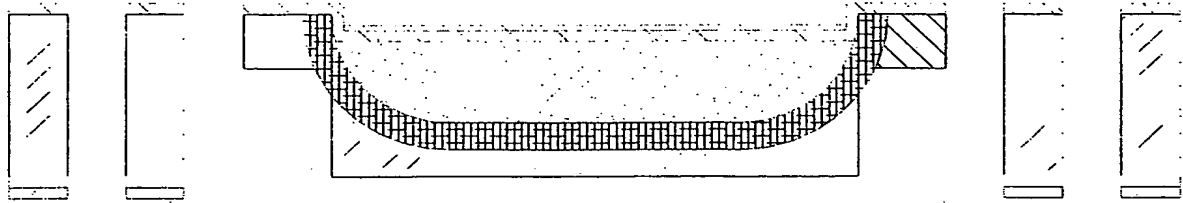
*Fig. \_\_\_\_\_* 147



- |   |   |
|---|---|
|  Silicon Oxide     |  Silicon Nitride |
|  Silicon Substrate |  Palladium       |
|  Porous Silicon    |  Photoresist     |

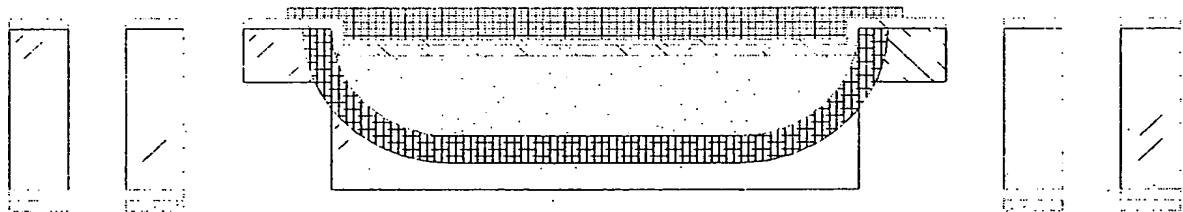
*Fig. \_\_\_\_\_* 148





- |  |   |
|--|---|
| <input type="checkbox"/> Silicon Oxide             | <input type="checkbox"/> Silicon Nitride        |
| <input type="checkbox"/> Silicon Substrate         | <input type="checkbox"/> Palladium              |
| <input checked="" type="checkbox"/> Porous Silicon | <input checked="" type="checkbox"/> Photoresist |

**Fig. \_\_\_\_\_ 149**

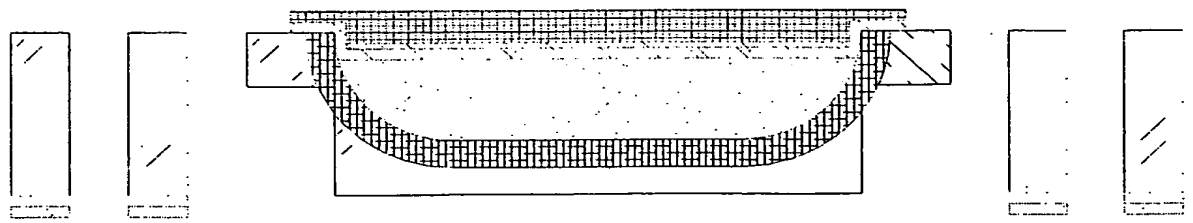


- |  |   |
|--|---|
| <input type="checkbox"/> Silicon Oxide             | <input type="checkbox"/> Silicon Nitride        |
| <input type="checkbox"/> Silicon Substrate         | <input type="checkbox"/> Palladium              |
| <input checked="" type="checkbox"/> Porous Silicon | <input checked="" type="checkbox"/> Photoresist |
| <input type="checkbox"/> Sol-Gel                   |   |

**Fig. \_\_\_\_\_ 150**

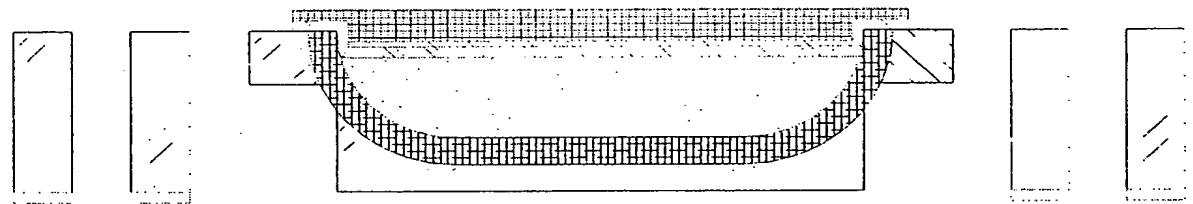
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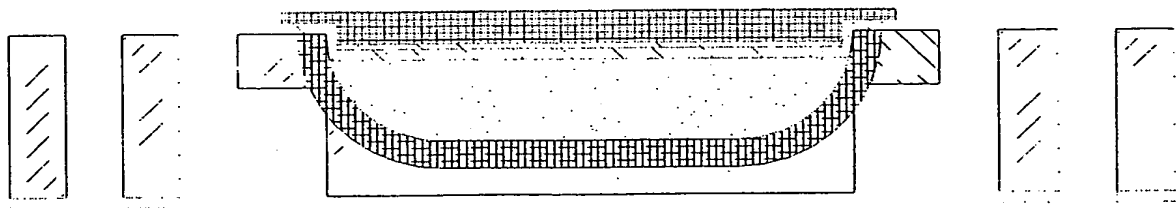
- |  |   |
|--|---|
| <input type="checkbox"/> Silicon Oxide             | <input type="checkbox"/> Silicon Nitride        |
| <input type="checkbox"/> Silicon Substrate         | <input type="checkbox"/> Palladium              |
| <input checked="" type="checkbox"/> Porous Silicon | <input checked="" type="checkbox"/> Photoresist |
| <input type="checkbox"/> Sol-Gel                   |   |

**Fig. 151**



- |  |   |
|--|---|
| <input type="checkbox"/> Silicon Oxide             | <input type="checkbox"/> Silicon Nitride        |
| <input type="checkbox"/> Silicon Substrate         | <input type="checkbox"/> Palladium              |
| <input checked="" type="checkbox"/> Porous Silicon | <input checked="" type="checkbox"/> Photoresist |
| <input type="checkbox"/> Sol-Gel                   |   |

**Fig. 152**



- |  |   |
|--|---|
| <input type="checkbox"/> Silicon Oxide             | <input type="checkbox"/> Silicon Nitride        |
| <input type="checkbox"/> Silicon Substrate         | <input type="checkbox"/> Palladium              |
| <input checked="" type="checkbox"/> Porous Silicon | <input checked="" type="checkbox"/> Photoresist |
| <input type="checkbox"/> Sol-Gel                   | <input type="checkbox"/> Ti-Tungsten            |
|  | <input type="checkbox"/> Gold                   |

*Fig. \_\_\_\_\_ 153*

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